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ABSTRACT

The manual presents an overview of federal special education legislation and information about specific disabilities. The summaries of P.L. 94-142 (the Education for All Handicapped Children Act) and the Rehabilitation Act of 1973 focus on the rights afforded to handicapped children and their families under the law. Information on disabilities is intended to provide resources for teachers and nonhandicapped students in mainstreamed classrooms. The manual covers basic definitions, answers to commonly asked questions, simulation activities, and suggestions for learning for the following disabilities: vision impairments, hearing impairments and deaf-blindness, speech disabilities, physical disabilities, mental retardation, learning disabilities, multiple handicaps, emotional disabilities and autism, and other health impairments. For each topic covered the manual lists relevant reading materials, films and organizations, and in a section on additional resources provides brief descriptions of books and other media resources that give general information on handicapping conditions and additional resources on approaches to fostering positive attitudes. Suggestions for appropriate behavior when meeting a person with a disability are also provided. (CL)

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RESOURCE

MANUAL

ON

DISABILITIES

COUNT ME IN

IS A PROJECT OF THE

PACER CENTER, INC.

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INTRODUCTION

Public Law 94-142, the Education for All Handicapped Children's Act, has paved the way for many children with handicapping conditions to be educated in a setting with non-handicapped children. For some students this means all day in the regular classroom; for others it means a few hours a day or some classes with non-handicapped children.

Moving children with disabilities into the mainstream requires some preparation for the handicapped child, the classroom teachers, and non-handicapped children. While the disabled child and the teachers may be given a great deal of preparation, often very little is done to assist the other pupils in learning about disabilities and relating to their handicapped classmates or handicapped people in general. Frequently there are fears about the disability, questions and comments about aids and appliances, and apprehensions about a child who is somewhat different.

Through training programs for adults and puppet show presentations for children, COUNT ME IN works to dispel the fears and myths that surround handicapping conditions and to increase the understanding and realization that children with disabilities are very much like all other children.

PACER Center, Inc. has developed this manual to be used as a resource guide by volunteers who assist with COUNT ME IN presentations, by teachers whose classes view COUNT ME IN puppet shows, and by others who are interested in helping children learn about handicapping conditions. It is our hope that COUNT ME IN presentations will awaken a curiosity in children and adults to learn more about disabled people and their handicaps.

The COUNT ME IN resource manual provides some very basic information about many disabilities. Included in the packet are many lists of books and organizations which provide information about particular disabilities and about equipment used by handicapped individuals. The danger of any brief summary of information on disabilities is that some information is unintentionally minimized or omitted. Therefore, the reader is encouraged to keep in mind that this resource manual is intended to be used as a guide, not a detailed authority, for general information about disabilities, for ideas on classroom activities, and as a reference for further study.

The summaries of P.L. 94-142 and Section 504 of the Rehabilitation Act of 1973 are included to give a brief overview of the rights afforded to handicapped children and their families under the law. The process of identifying children with disabilities, and conducting proper assessments to define each child's needs and providing appropriate programs to meet those needs are extremely important. We hope that the inclusion of this information will provide encouragement to all individuals who are interested in children.

ASPECTS OF THE LAW

SUMMARY OF PUBLIC LAW 94-142

THE EDUCATION OF ALL HANDICAPPED CHILDREN'S ACT

The Education of All Handicapped Children's Act was passed by Congress and signed into law by President Ford in November of 1975.

In summary, it states:

> "All children regardless of handicapping condition, are entitled to a free, appropriate public education in the least restrictive alternative."

WHAT IS MEANT BY "ALL HANDICAPPED CHILDREN"?

Any child (in Minnesota), from ages of four to twenty-one or upon completion of high school, who has a handicap, regardless of severity, is entitled to a free appropriate educational program.

For children of preschool age (birth through three years), the service provided is permissive and at the discretion of the local school district (in Minnesota). Many districts do provide early programs for children with disabilities such as vision and hearing impairments.

Public Law 94-142 requires that all districts identify, assess, plan for and monitor all preschoolers who have handicapping conditions. (See additional information on "Locating Handicapped Children" on page 5).

WHAT HANDICAPPING CONDITIONS ARE INCLUDED UNDER THE LAW?

The handicaps included are:

hearing impairments
vision impairments
deaf-blind and all multiple handicaps
speech impairments (Minnesota Law)
mental retardation
physical disabilities
emotional disabilities
learning disabilities
behavior problems (Minnesota Law)
health impairments (epilepsy, diabetes, etc.)

HOW ARE SPECIAL EDUCATION SERVICES PROVIDED "FREE OF CHARGE"?

The public school district in which the child's parents or guardians reside is financially and legally responsible for that child's special education program and related services. Handicapped children who attend non-public schools are also eligible to receive special education services from the public school system.

HOW DOES THE SCHOOL DISTRICT DETERMINE AN "APPROPRIATE" EDUCATION?

The law states that every school district shall:

a. "assess" each handicapped child to determine his or her strengths and weaknesses and specific educational needs.
b. plan an "individual educational program" (IEP) for each child, based on each need as determined by the assessment. The IEP should be updated each year to assure that the student is receiving appropriate educational services. Parents/guardians must be invited to take part in the IEP meetings.
c. establish a plan for the periodic review of the child's progress (meeting dates). Parents are not automatically included in review meetings. If they wish to attend, they should ask to be invited. At least one review is required annually under Minnesota Law. Parent and/or school may request additional meetings regarding the child's progress if they feel the meetings are needed.
d. "reassess" the student every three years (minimum) to determine the students progrss and needs. Parents and/or schools may request reassessments more often, if needed.
e. carry out all procedures to assure that parents are afforded all due process rights. If a disagreement exists concerning a child's assessment or educational plan, parents and schools have the right to utilize the appeal process (conciliation, hearing, appeal to the Commission of Education.)

HOW ARE PARENTS INVOLVED IN THIS PROCESS?

Parents have the right to:

a. be notified in writing of any plans to assess their child or change the child's educational program.
b. request an assessment.
c. participate in planning of the individual educational program (IEP).
d. see the child's records and obtain copies of those records.
e. request a conciliation conference (an informal conference) with school personnel to discuss disagreements on any part of the educational program.
f. request a due process hearing, an appeal to the State Commissioner of Education, or an appeal to district court for unresolved problems.

WHAT IS MEANT BY AN APPROPRIATE EDUCATIONAL PROGRAM?

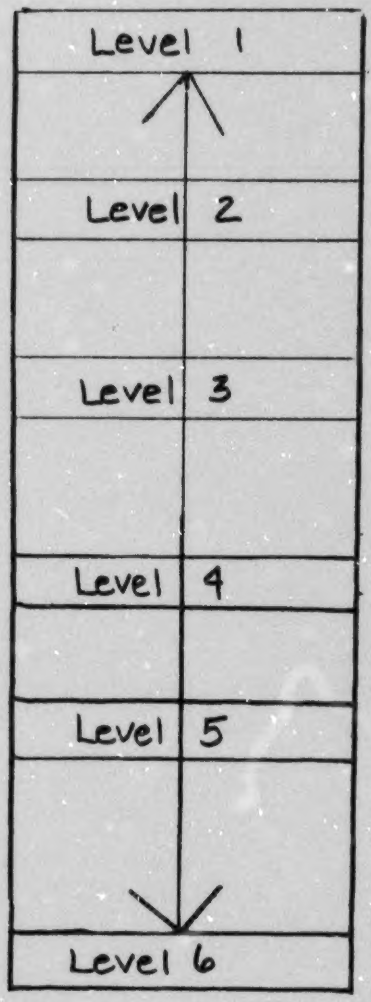
The school district shall provide the education deemed necessary as a result of the assessment and decisions made at a team staffing.

The school district shall educate each handicapped child in as normal a setting (with nonhandicapped children) as is possible and appropriate.

Schools should be flexible in programming for students--a continuation of services should be available. Children should be able to move from one level of service to another during their many years of public school as their needs dictate.

The following is an example of the different levels of service that should be available to serve the needs of handicapped children:

WHAT ARE THE LEVELS OF SERVICE PROVIDED TO HANDICAPPED STUDENTS?



LEVEL I. In Level I a nonhandicapped pupil is placed in a regular classroom and does not receive special education, or is not enrolled in school. This level includes assessment services, monitoring, observation, and follow-up.

LEVEL II. In Level II a pupil is placed in a regular classroom. Instruction and related services are provided indirectly through the regular teacher, teachers, parents, or other persons who have direct contact with the pupil for monitoring, observation, and follow-up.

LEVEL III. In Level III a pupil receives direct instruction from a teacher, or related services from a related services staff member for less than one-half of the day. Consultation and indirect services are included.

LEVEL IV. In Level IV a pupil receives direct instruction from a teacher for one-half day to less than full-time. Consultation and indirect services are included.

LEVEL V. In Level V a pupil receives full-time direct instruction from a teacher within a district building, day school, or special station or facility. Integrated activities solely for socialization or enrichment, and related services are excluded when determing full-time. Consultation and indirect services are included.

LEVEL VI. In Level VI a pupil is placed in a residential facility and receives direct instruction from a teacher. Consultation and indirect services are included.

NOTE: These levels are based on Minnesota Statutes.

IDENTIFICATION OF HANDICAPPED CHILDREN

WHO MUST IDENTIFY HANDICAPPED CHILDREN?

Public Law 94-142 states that every school district must utilize procedures which insure that all children (birth to 21) residing within their jurisdiction who are handicapped and in need of special education and related services are identified, located, and evaluated. Included are children in all public and private agencies and institutions who live within that jurisdiction, as well as children of preschool age. This process of identifying handicapped children is often called "child find."

The importance of good systems for the identification and assessment of handicapped young children (birth to four) cannot be over-emphasized. School districts must begin planning for preschool handicapped children even though educational programs for handicapped children under the age of 4 are permissive in Minnesota. Permissive means that school districts may serve young children under 4 and receive state aids, but they are not required to provide educational programs. By identifying disabled children as early as possible, adults who work with young children may offer help in such a way as to enhance the child's potential and minimize some of the negative effects of the disability. Identification of a handicapping condition in a child is only the first step in the process of assessing the specific needs of the child and planning an appropriate program.

HOW ARE HANDICAPPED CHILDREN LOCATED?

Identification activities can include the use of school census, screening, general public information, and referrals from parents, teachers, doctors, agencies or other interested people.

CENSUS

All school districts in Minnesota (Minneapolis, St. Paul and Duluth are exempted)* are required to take an annual school census to identify all children, ages birth to 21, including those who are handicapped.

SCREENING

Screening refers to a method of identifying possible handicaps by giving children a series of health or educational tests. Some examples of screening tests are those given at periodic health check-ups or those given by schools to 4 year old children the year prior to kindergarten to check vision, hearing, motor skills, and coordination. Routine screenings such

* These three are cities of the first class and are not required under law to have an annual census.

as for vision, hearing, or scoliosis (curvature of the spine) are conducted at various grade levels in elementary schools.

Screenings do not provide enough detailed information to determine that a handicap does indeed exist. If a child does not pass screening tests, assessment is the necessary next step.

PUBLIC INFORMATION PROGRAMS

Information about various disabilities through media sources (TV, radio, newspapers, etc.) may help parents or others to recognize a disability or particular delay in a child.

REFERRALS BY PARENTS

Referrals are the means by which a parent or other interested person may request that an assessment be arranged for any child. A parent is the primary observer of a child, the one who sees the child daily in many different situations, and may often be the first to suspect that a problem exists such as a developmental delay, a hearing problem, a learning disability, or some other handicap. A parent may request an assessment for the child at any time a disability is suspected.

REFERRALS BY TEACHERS

Classroom teachers can be most important in making referrals because of their daily contact with many students and their ability to recognize a problem which may indicate a student is handicapped. Teachers should be aware of signs that indicate a handicapping condition.

REFERRALS BY MEDICAL PERSONNEL AND AGENCIES

Medical personnel, especially pediatricians [illegible] pediatric nurses, may often detect a condition that could warrant the need for special education. These professionals often encourage the parents to seek out an assessment from the school or from a medical facility, whichever is most appropriate. Persons in agencies such as Head Start programs, day care centers, group homes, scouts, or park programs may suspect a problem or disability in a child. It is appropriate to discuss the observation with the parent or school, whichever is appropriate, and have the child referred for assessment.

WHAT IS THE ASSESSMENT PROCESS?

Each school has its own procedure for referring a child for assessment whenever a problem is identified. If the child fails a routine school screening, the school should automatically indicate to the parents what follow-up assessment is necessary and explain their way of providing for it.

WHAT IS THE ASSESSMENT PROCESS?(CONTINUED)

If the teacher suspects a disability or need for assessment, the school usually has a referral form that can be completed by the teacher and given to the designated person, such as principal or special education director. The teacher may learn more about the child by discussing concerns with the parent before making a referral. There are many resources available to help teachers learn more about disabilities.

Sometimes a teacher may find it necessary to initiate the referral process for a particular student even though the school district does not presently have the necessary resources to serve the child. The intent of the law is clear. All handicapped children shall be served with appropriate programs. Teachers, parents, and all advocates for children must be concerned if school districts adopt policies that are in conflict with the intent of the law.

When a parent wishes to request an assessment, the first step is to notify, in writing, the child's home school. A letter should be sent to the principal or the special education director, and a copy of the letter retained by the parent. It might be appropriate for a copy of the request to be sent to the classroom teacher also. The letter should include information as to the nature of the problem, observations of parents and others, and reasons for wanting an assessment.

Within a reasonable period of time (approximately 10 school days) the school must respond to the parent's request for an assessment. If the school agrees to assess the student, it has 30 school days to complete the assessment.

Public Law 94-142 states that parents must be notified in writing by the school about the details of the assessment. The law requires that for an initial assessment, parental written consent must be obtained before the school can proceed.

The identification and assessment processes are extremely important if all handicapped children are to be provided with a free appropriate public education. Teachers and parents play a significant role in insuring that all handicapped children are located, identified, and evaluated.

LEAST RESTRICTIVE ALTERNATIVE

WHAT IS MEANT BY THE LEAST RESTRICTIVE ALTERNATIVE?

The integration of handicapped children into the every day life of the public school has been greatly increased in the last decade, especially since Public Law 94-142 was passed. According to the law, handicapped children are to be educated, to the maximum extent possible, with non-handicapped children. This concept is known as the "Least Restrictive Alternative."

In the past many children with disabilities were separated from their normal peers and kept in special classrooms for handicapped children throughout their school years. Sometimes the children in these classrooms had similar handicaps, or in some cases very dissimilar handicaps, but nonetheless children were segregated from the rest of the school population because of the fact they were "disabled." These children missed many opportunities for learning and development; they were categorized by what they couldn't do rather than by what they could do.

"Mainstreaming" (a term frequently used) is sometimes misunderstood. It does not mean that every handicapped child will be spending all day in a regular classroom setting. For some children this would not be the most beneficial placement. A child should be placed with non-handicapped peers in the most appropriate way. For some, the academic challenge of a regular classroom is appropriate. For others, one or two hours a day in a non-academic setting is the best integration plan. Each child's program must be considered individually. The following two examples may illustrate this principle:

> John is an autistic child with severe social and learning disabilities. His parents and teachers decided he would best be served in a one-to-one teaching situation in a special classroom within a public school building. He would probably gain little from placement in a regular classroom but he would gain from being in a school with non-handicapped students. On the other hand, Steven has muscular dystrophy and uses a wheelchair, but does well in a regular 5th grade classroom. He receives adaptive physical education and physical therapy twice a week.

Both of these students have been placed in the least restrictive alternative which is appropriate for their level of ability.

The COUNT ME IN project helps students develop positive attitudes about disabled persons by dispelling fears and myths about handicaps. Children and teachers have a chance to learn about handicaps, talk about their feelings, and realize that people with disabilities are more "like them than different."

Knowledge and understanding of individuals with disabilities can foster positive attitudes that will enable the "least restrictive alternative" to work, not just in the classroom, but also in the hallways and the neighborhoods, in every walk of life.

SECTION 504 OF REHABILITATION ACT OF 1973

WHAT IS SECTION 504?

Section 504 of the Rehabilitation Act of 1973 is often referred to as the "Civil Rights Act for Handicapped Persons." Its provisions affect a wide range of programs including education. Basically the Rehabilitation Act makes it illegal for any agency or organization that receives federal funds to discriminate against a handicapped person solely on the basis of his or her handicap.

All public and private organizations receiving federal money must take special steps (including making programs accessible) to make it possible for people with handicaps "to learn, work, and compete on a fair and equal basis." Non-compliance can result in cutoff of all federal support to the agency or organization.

WHAT HANDICAPS ARE COVERED BY SECTION 504?

The law prohibits discrimination against persons whose handicaps are severe enough to substantially limit one or more of the major life functions. Handicaps covered include speech, hearing, visual, and orthopedic impairments; cerebral palsy; epilepsy; muscular dystrophy; multiple sclerosis; cancer; diabetes; heart disease; mental retardation; emotional illness; and specific learning disabilities such as perceptual handicaps, dyslexia, minimal brain dysfunction, and developmental aphasia.

HOW DOES SECTION 504 APPLY TO EDUCATION?

Section 504 makes many of the same requirements for education of handicapped children as does Public Law 94-142. The basic requirements are that:

*No handicapped child can be excluded from a public education because of disability;

*Every handicapped child is entitled to a free, appropriate education, regardless of the nature or severity of handicap;

*Handicapped children must be educated with non-handicapped students to the maximum extent appropriate to their needs;

*Evaluation (assessment) procedures must be improved to avoid the inappropriate education that results from misclassification of a student;

*Procedural safeguards must be established so parents and guardians can object to evaluation and placement decisions regarding their children;

*State or local educational agencies must locate and identify unserved handicapped children.

WHY DO WE NEED THE ADDITIONAL PROTECTION OF SECTION 504?

Although the provisions of Section 504 relating to education are similar to those of Public Law 94-142, Section 504 provides the additional sanction of possible withdrawal of all federal funds from an agency that is found not to be in compliance. In addition, as a civil rights act, Section 504 offers an additional avenue of appeal that may be helpful if the remedies under Public Law 94-142 do not resolve problems.

WHAT REQUIREMENTS ARE MADE FOR ACCESSIBILITY?

Section 504 requires that all programs receiving federal funds must be accessible to handicapped persons. New facilities constructed after June 3, 1977 must be designed to meet the accessibility standards of the American National Standards Institute. Existing programs also must be made accessible, but this does not mean that every building must be totally remodeled. The emphasis is on program accessibility. An existing program may be considered to be accessible if the portions of the facilities used by handicapped persons are made accessible or if other means are employed to make the program accessible, such as assigning students to accessible facilities or using aides to assist the students. Such modification, however, cannot result in the segregation of handicapped persons from non-handicapped persons who are involved in the program.

Accessibility modifications can be made at reasonable cost, and technical assistance is available to institutions to help them design the changes in practical ways.

HOW LONG HAS SECTION 504 BEEN IN EFFECT?

The regulation went into effect June 3, 1977. Programs operating in existing facilities where no structural changes were needed had to be in compliance by August 2, 1977. In cases where structural changes were needed, the agencies were required to submit by December 2, 1977, a plan to make the changes. By June 2, 1978, all federal fund recipients were required to complete a self-evaluation process to determine whether they were in compliance with Section 504, in consultation with handicapped individuals and organizations. Public elementary and secondary schools were required to meet the "free, appropriate education" requirements by September 1, 1978. By June 2, 1980, all needed structural changes must be made in existing facilities that receive federal funds.

HOW CAN A COMPLAINT BE FILED?

If a person believes that any aspect of Section 504 has been violated (discrimination on the basis of handicap in any program funded by the federal government,) he or she may initiate a complaint to the Office for Civil Rights.

The complaint should be in the form of a letter explaining who was discriminated against, in what way; by whom or what institution; when the discrimination took place; who can be contacted for further information; writer's name, address and telephone number; and as much background information as possible.

The letter should be addressed to the Region V, Office of Civil Rights, 300 South Wacker Drive, Chicago, Illinois 60606. Telephone: (312) 353-2521.

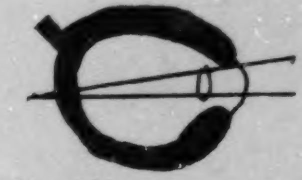
The federal office is: Department of Health Education and Welfare, Office of the Secretary, Office for Civil Rights, Washington, D.C. 20201.

In the case of complaints against school districts, Section 504 requires each school district to have a Grievance Coordinator, an impartial person who will take the complaint and steer it through the system. The requirements are spelled out in Section 504, 45, Code of Federal Regulations 84.7.

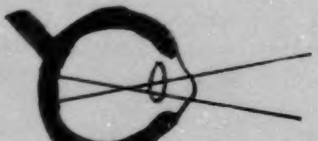
DISABILITIES
VISION IMPAIRMENT

Visual disorders fall into three basic categories: visual malfunctions which can be corrected with lenses; visual impairments which adversely affect sight even with corrective lenses; and severe vision impairments which affect sight to such an extent that alternate methods must be used to read and travel.

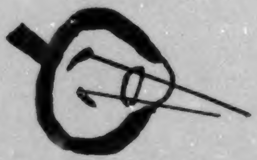
Hyperopia, myopia and astigmatism are all common vision malfunctions which can usually be corrected. The drawings below illustrate these conditions.



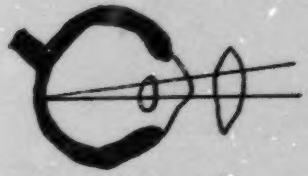
HYPEROPIA



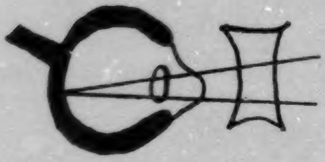
MYOPIA



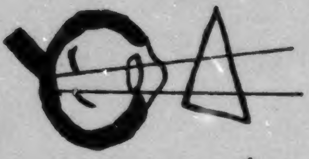
ASTIGMATISM



HYPEROPIA (A)



MYOPIA (B)



ASTIGMATISM (C)

Farsightedness (hyperopia) occurs when images fall in back of the retina instead of directly on it. Nearsightedness (myopia) is the result of images which fall in front of the retina. Hyperopia is corrected by a convex lens (A) and myopia is corrected by a concave lens (B). When two adjacent portions of the cornea have different curvatures, the result is astigmatism. A lens that bends nonfocusing light rays corrects astigmatism (C).

Visual acuity or the ability to see objects can be measured using the Snellen Eye Test and is reported in the form of a fraction. Normal vision is 20/20. A person is considered to have 20/70 vision if, when standing 20 feet from a Snellen Chart, he or she can only identify the same symbol that the normal eye would be able to identify at 70 feet or more.

WHAT IS VISION IMPAIRMENT?

Public Law 94-142 defines visually handicapped as "having a visual impairment which even with correction, adversely affects a child's educational performance. The term includes both partially seeing and blind children."

In other words, "visually handicapped" means an inability to use vision--at all or to some degree--the way children with normal or correct vision use their sight to learn.

For practical purposes, two categories are often used--depending on whether or not the child can use his vision to learn.

The term "partially seeing" is used to refer to a loss of visual acuity in the range of 20/70 to 20/200 with correction. To these youngsters, objects may look dim, blurred, or out of focus. Some children may have trouble seeing color. Some lack peripheral vision or see only those things directly in the center of their line of vision. This is called "tunnel vision". These children can still use their vision with magnifiers or other similar devices.

The term "blind" is used to refer to children who are totally without vision or who have very limited object perception. They must rely on hearing and touch as their chief means of learning and use alternative techniques to read, write or travel. These techniques include Braille, white canes or guide dogs, aids and appliances marked in Braille and other methods to gain information which sighted persons gain through their vision. Using these alternative techniques, blind persons can lead independent lives.

The legal definition of blind indicates a "visual acuity of 20/200 or less in the better eye after correction, or severely reduced peripheral vision (tunnel vision)." The definition includes not only persons who are totally without vision (that is unable to distinguish light from dark or with no perception), but also those who have some vision in one or both eyes.

The overwhelming majority of people referred to as blind do have some remaining vision.

CAUSES OF PARTIAL SIGHT OR BLINDNESS

Some of the causes of vision impairments in children are listed below:

AMBLYOPIA: dimness of vision without any apparent diseases of the eye; usually the result of not using an eye ("lazy eye") in order to avoid the discomfort of double vision caused by a muscle problem.

CATARACTS: A clouding of the lens of the eye which reduces the amount of light received at the retina. Cataracts most often occur in only one eye. It can progress to the point of interference with vision. The cataract can often be surgically removed and corrective lens or contact lens can be worn. The chance of perfect vision is contingent upon other abnormalities also associated with the cataracts. The most frequent cause of cataracts in children is congenital.

COLOR DEFICIENCY: reduced ability to perceive difference in color.

DIABETES: a disorder involving defective metabolism of glucose and other substances which may result in degenerative eyesight.

GLAUCOMA: a condition in which the normal fluid of the eye does not drain properly causing increased pressure within the eye. The increased pressure causes damage to the optic nerve resulting in severe loss of sight or tunnel vision. It can be treated.

MATERNAL SYPHILLIS: a very uncommon cause of blindness in recent years because many states now require that silver nitrate eye drops be given to newborns immediately after birth to prevent loss of vision.

RETROLENTAL FIBROPLASIA: a disease of the retina in which a mass of scar tissue forms in the back of the lens; usually affects both eyes and can cause a complete loss of sight.

RETINITIS PIGMENTOSA: a condition in which retinal function progressively worsens. Side vision usually decreases before central vision.

RETINAL DETACHMENT: an eye condition in which a hole in the retina has allowed fluid to leak in behind the retina and push the retina off the back of the eye. Vision can be lost but surgery can correct the condition.

TRACHOMA: an infectious disease of the eye causing scarring of the cornea, which reduces vision to light perception only.

Some children with eye problems may have other impairments caused by a specific disease or disorder such as prenatal German Measles (Rubella).

Vision impairment in and of itself does not impair intelligence or hearing. Vision impairment or blindness does not connote helplessness, inferiority or dependence.

The Minnesota Department of Education estimates that 612 children (ages 0-21) in the state are receiving some type of special education services in 1983 because of visual handicaps. Nationwide, visual impairments are found in approximately one student in 1,000 and approximately three out of ten of those students must use alternate methods of learning.

SIGNS OF POSSIBLE EYE TROUBLE IN CHILDREN

BEHAVIOR

Rubs eyes excessively.

Shuts or covers one eye, tilts head or thrusts head forward.

Has difficulty in reading or in other work requiring close use of the eyes.

Blinks more than usual or is irritable when doing close work.

Is unable to see distant things clearly.

Squints eyelids together or frowns.

APPEARANCE

Crossed eyes.

Red-rimmed, encrusted, or swollen eyelids.

Inflamed or watery eyes.

Recurring styes.

COMPLAINTS

Eyes itch, burn or feel scratchy.

Cannot see well.

Dizziness, headaches, or nausea following close eye work.

Blurred or double vision.*

AIDS AND APPLIANCES

There are many aids and appliances available to a person with limited vision to enable him/her to travel independently, read, and do most of the ordinary tasks of daily living.

TRAVEL AIDS

Today most people who are blind use a long white cane to gain information about the area where they are walking. Using a cane properly, blind people can travel quickly and easily on their own wherever they need to go.

The cane is straight and usually made of metal or fiberglass with some nonskid padding at the top for gripping. Rigid and nonrigid (folding, telescopic or screw together pieces) are available with metal, nylon and light sensitive tips. Blind adults use canes about shoulder-height or 4-5 feet long depending on the person's height and stride. Canes for children should be shorter. The blind person taps back and forth in an arc about the width of the shoulders. If a person walks quickly, a longer cane helps him/her know sooner what is in the path.

A child who is blind, or an adult who has recently become blinded, must learn how to use a cane well.

Many areas have teachers especially trained to help blind people learn how to travel in their community, to cross streets, to read maps, to negotiate traffic, to ride public transportation and to learn other necessary travel skills. Most blind people keep their white canes with them the majority of the time when outside of their own homes. While sitting in class on or at a desk, the cane might lie on the floor nearby or in another convenient spot.

Using the white cane in this way has only been common since the late 1940's when veterans blinded in World War II originated this usage.

A specially trained guide dog can also be used for travel but is less frequently used since techniques for cane travel have been developed. The dogs are trained at a school. The owner is also trained in techniques of using a guide dog. The dog on a leash walks slightly ahead of the blind person so that the blind person can learn, from the movement of the dog, about steps and other obstacles. The blind person directs the dog, but the dog is trained to disobey a particular command if that movement would endanger his master's life (e.g. walking in front of a car).

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*This information on the signs of possible eye trouble in children was used with the permission of the National Society to Prevent Blindness, New York, N.Y. 10016.

Guide dogs do require care, and can become sick or injured just as any animal might. Many blind people feel that a cane can do the same things a dog can, without the associated problems of animal care.

LEARNING AIDS

Many alternative methods of learning have been developed for people **without** enough sight to use visual methods.

BRAILLE is a system for reading and writing, developed in 1824 by a 15 year old French boy, Louis Braille, who was blind. Braille is composed of raised dots arranged in various combinations to represent single letters or entire words. Braille is read with the fingertips and can be written with a Braille writer or Perkins Brailler (similar to a typewriter) or with a slate and stylus. (The pointed stylus is used to punch dots into heavy paper using a Braille slate as a guide.)

The basic "Braille Cell" is 3 dots high and 2 dots wide 1..4
2..5
3..6

Each letter or number is composed of a certain combination of these dots. Some very common words and abbreviations are denoted by a single Braille symbol.

There are three "grades" of Braille. In grade one all letters in most words are included. Grade two is a shortened form with many contractions. It can be read faster and requires less space. Grade three is a scientific/mathematical notation. It takes some practice to become a good reader of Braille, as it does with reading of print. The learning process is somewhat the same. The beginning reader is taught to associate a certain symbol with a letter sound or a word meaning. When learning Braille, the symbol is tactile rather than visual.

Braille can be read and written at the same speed as ink print, depending on the ability of the reader.

Braille books are large and quite expensive to produce. Most states (including Minnesota) have libraries of Braille material which can be borrowed by blind persons. By U.S. Law, books for blind persons can be mailed free of charge.

The only disadvantage of Braille, most blind Braille readers would say, is its limited availability.

"TWIN VISION" books are available with both Braille and print words and pictures in print and raised form. People can read them to sighted and blind children.

AUDITORY MATERIALS Many blind persons, especially those blinded later in life, rely solely on auditory materials. Others use them to supplement Braille materials. Here is a brief description of some of the many materials available:

Talking books (tapes of books available from state libraries that can be adjusted to play at a rate faster than normal speech)
Talking calculator
Talking watches and clocks
Kurzweil machine (an electronic device which scans a printed page and produces an audible reading of the material--still very expensive)

COMPUTER USE: **Computers can be adapted for use by those who are blind in a variety of ways: voice synthesizers provide spoken rather than printed readout; the Brailler can be motorized and adapted as a printer; and keyboards can be brailled or otherwise adapted as needs of the person dictate.**

OPTICON: a device that translates printed material into electrical impulses which are read with the fingertips. The reader passes a scanner over a regular printed page and feels the electrical pattern (which is not Braille) with his other hand.

READERS: Many older blind students, particularly at the college level, use volunteer or paid readers to accomplish their reading assignments.

LOW VISION AIDS: Such devices as closed circuit television which enlarge print and various magnifiers are used by persons with some vision to read print. Depending upon the specific nature of the visual disability and its effect on functional vision, these aids are helpful to some persons, but for many they are not. Oftentimes, these aids are useful in combination with Braille tapes and readers. Some books are also produced in large print editions for primary and secondary levels. However, they are not usually available at the post-secondary level because of the expense of production.

Watches, clocks, games, cooking equipment are also available with large print.

DAILY LIVING AIDS: There is a wealth of adapted materials which are used by people who are blind. Many blind people create their own adaptations to meet their individual needs. Catalogues of materials for the blind list items--one such catalogue is available from the American Foundation for the Blind, Consumer Products Dept., 15 W. 16th St.,
A few of these materials are listed as examples:
Talking thermometer
Tactile watch (with dots)
Low vision watch (large numerals)
Magnifier for sewing machine (attaches to needle area)
Chiming Clock
Raised numeral clocks
Timer with raised dots
Braille Scrabble, Monopoly, playing cards
Tactual Connect Four, Mastermind
Tactual checkers (recessed squares on board)
Chess board (with raised black squares drilled for pegged chess pieces)
Dominoes (with raised black dots)
Pegboard Tic Tac Toe
Pie cutting guide
Electronic liquid level indicator
Electric metronome (with tactual scale)
Braille instructions and cookbook
Coin organizers
Braille large print labeller
Check & envelope guides for writing
Carpentry tools marked in Braille

SPORTS People who are blind ride bikes, ski, swim, jog, bowl, play baseball and other games often with only minor adaptations. These adaptations are more often individually made to the needs of the particular person than standardized. Blind children, because of the low incidence of their handicap, usually play with sighted playmates and make unique adaptations in order to participate. Many childhood games can be enjoyed if participants are just required to tell what they are doing or what is happening.

BEEP BASEBALL is played with a large baseball with an electronic beep and two bases that beep. A sighted pitcher throws the beeping ball to the blind batter. If the blind batter hits the beeping ball out into the field, he runs to whichever base is beeping. When the ball is hit, the five blind fielders drop to their knees and crawl around looking for the ball. If the batter makes it to the buzzing base before the fielders pick up the ball, he has a point. But if fielders pick up the beeping ball before the batter makes it to buzzing base, he is out.

BALLS WITH BELLS inside are available in several sizes.

BASKETBALL is usually adapted by individuals in unique ways. A regulation ball is easily heard, baskets can be identified with different noises.

Many people who are blind cross country ski with a sighted companion. There are special guide programs at downhill ski areas. Blind bowlers can use a guide rail. Some blind people roller skate, ride horses and swim. Some blind people ride tandem bicycles with a sighted friend. Children can ride regular tricycles in controlled areas.

EDUCATIONAL METHODS Most blind students, for whom vision impairment is their only handicap, would probably receive instruction in reading and writing Braille from a special teacher at school. These teachers usually travel to several schools. That teacher would obtain the child's classroom materials in Braille or on tape. The student would spend most of his day with a regular class, especially after Braille is learned. Many blind students learn to use a regular typewriter as soon as possible so a sighted teacher can easily correct their work.

FEELINGS ABOUT BEING BLIND

Laurie, a 14 year old girl who lost her vision in mid-childhood, describes her feelings about being blind in a recently published book, Feeling Free (Addison-Wesley Publishing Co., Inc.: Reading, MA 1979.) She states:

> "I always wanted to be like everyone else, but when I went blind I just figured everyone was going to treat me differntly. But it's not like that at all. In fact, sometimes now it makes me feel good to know that I'm not like everyone else. I have something that's different.
>
> Some things that make me really uncomfortable. One thing that really gets me upset is when people talk about me as if I weren't even there! I can't even describe how angry that makes me. Like sometimes someone will ask my mother, "And how's Laurie?" and I'm standing right there! I'm not invisible.
>
> My mother just says, "Why don't you ask her?"
>
> I don't think I'm really that different. Sure I have a handicap, but I also have as many friends as anyone else. I go to a public school just like anybody else, and I do almost everything I want to try. I just don't think of myself as being different."

I guess I'm just like most 14-year-old girls.

Sometimes when I'm walking with my cane I get scared. I'm afraid that I might walk off a curb or go up somebody's driveway or something. Also, when most people cross the street they can usually look for cars that might be coming. I have to listen.

I don't always like to use my cane. If I'm going to the store with one of my friends, it makes me feel funny to be carrying it around. It makes me feel awkward.

When I get older, I want to get a guide dog. I'd get one now if I could, but you have to be 18 years old first. I guess they figure that an adult will take care of the dog better, and that it would be easier to teach an adult how to work with a guide dog than it would be to teach a kid.

I like being as independent as possible. It's probably my biggest thing. I'd much rather try something myself than have someone do it for me. If I can't do it, then I'll try asking for help.

I think that I'm going to make it, if you know what I mean. I think that everything's going to be all right for me. I'll be able to do more and more things on my own. I won't always have to have somebody else around. I'll be independent."*

PUPPET USED TO PORTRAY VISION IMPAIRMENT

The puppet who portrays a blind child in COUNT ME IN programs has been blind from birth. She carries a white cane, wears a Braille watch and has Braille books and games. She enjoys playing the drums and riding a tandem bike with her friends.

QUESTIONS OUR PUPPET HAS BEEN ASKED

DO YOU ALWAYS USE YOUR WHITE CANE?

No, only when I'm going to a place I don't know well. I don't use it at home **most of the time** because I know where everything is! In school, although I know where things are, I like to have my cane with me in case teachers or kids move things around.

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*Reprinted from FEELING FREE, © 1979, American Institutes for Research by permission of Addison-Wesley Publishing Company, Inc., Reading, Mass. 01867. All Rights Reserved.

IF YOU LOSE YOUR WHITE CANE OR SOMETHING ELSE, HOW DO YOU FIND IT AGAIN?

I feel around the places where I usually leave it or I try real hard to remember where I left it. Otherwise I ask someone for help.

WILL YOU HAVE THAT WHITE CANE ALL YOUR LIFE?

As long as I want it. But as I grow, I get new ones, because a cane has to be a specific size for my height. Some day I may get a fold-up cane to carry in my pocket.

WILL YOU EVER GET A SEEING EYE DOG?

Maybe. I have to be 18 to have a seeing eye dog. When you get a guide dog you have to go to school to learn how to use and care for the dog properly.

HOW CAN YOU TELL WHERE FOOD IS ON YOUR PLATE?

When I was younger, I liked to pretend my plate was like a clock. Mom would put my meat at 12:00, potatoes at 3:00, vegetable at 6:00, and salad at 9:00. But now that I'm older, I can tell what foods are by their smell and by feeling them with my fork.

HOW CAN YOU POUR A GLASS OF JUICE?

I just put my finger over the edge of the glass to tell how full it's getting. We use a certain pitcher at home for orange juice, another for milk, so I can tell by the feel of the pitcher what's inside.

HOW CAN YOU TELL WHAT PEOPLE LOOK LIKE?

Well, there are several ways. If it's a close friend, I ask to touch their hair and face and then I have some idea. But usually I listen to the voice and imagine what a person looks like. I figure a person who sounds nice must look nice. I also ask people to tell me what they look like.

WHAT SPORTS CAN YOU PLAY OR WHAT OUTSIDE ACTIVITIES CAN YOU DO?

I like many different sports. Most can be adapted so I can play, too. I like to ride a tandem bicycle with my brother or friends. Cross country skiing is fun. I follow in the tracks of the person ahead of me.

ARE YOU SCARED BEING BLIND LIKE I'M SCARED OF THE DARK?

No. I've learned how to get around and how to listen really well, so being blind doesn't scare me.

DO YOU HAVE HOBBIES LIKE OTHER KIDS?

Sure. I love to read. I get Braille books through special libraries. And I have quite a record collection.

CAN YOU REALLY HEAR BETTER THAN OTHER PEOPLE?

No, but I do need to pay better attention to the things I hear because that is a very important way I learn about things.

ACTIVITIES FOR CHILDREN

For many people the idea of being blind is quite scary. Some cannot imagine how they could accomplish quite ordinary tasks without seeing. Most blind people will tell you that they are not frightened and that with practice most tasks are quite easy. While we believe it is important to help children understand how blind people accomplish various tasks, it is important to stress during these experiences that blind people are not frightened and do not have extraordinary abilities.

1. TOUCH AND FEEL BAG (preschool and primary grades)

EQUIPMENT: Cloth or paper bag, 3-4 items familiar to children, one or two items not so familiar.

WAYS OF PLAYING GAME: Seat children in a circle.

a. Put 6 items in bag. Name one item and have child find it by "feeling". Take it out for all to see. Pass bag on.

b. Put one item in bag. Pass bag around and have each child tell what he or she thinks it is by just feeling.

c. Put very unusual item in bag. Have one child describe what it feels like and have rest of class guess what it is.

2. GUESS WHAT THAT IS (preschool and elementary)

EQUIPMENT: A recording of sounds (like cars honking, etc.)

Tell the children to close their eyes and pretend they are standing on a curb (or standing in a doorway). Like a blind person, each must listen carefully to hear what's going on, what's going by, what animal that is, etc. What would they learn/know from the sounds?

3. WHAT'S GOING ON (elementary)

EQUIPMENT: Movie and projector.

Watch a movie without any light projection. Discuss how students think the characters and scenery look. Show the movie again with projection, and compare notes.

4. "WRITING BRAILLE" (Upper elementary)

EQUIPMENT: a blunt pencil and heavy paper for each participant. A card with the Braille alphabet.

A pencil can be used to punch Braille dots into a piece of construction paper. You might have the children read each other's Braille notes.

5. TELL ALL (upper elementary)

EQUIPMENT: None

Have one student volunteer sit in a central place in the classroom with eyes closed for a certain period and afterwards report what they could tell about events during that time.

6. TRY IT OUT (all ages)

EQUIPMENT: Aids and appliances used by blind and partially sighted persons (e.g. slate and stylus, bell ball, Braille games, Braille books, white cane).

Let students try equipment used by the blind. Do not emphasize trying it without seeing because the student might think a blind person would experience as much difficulty with the task as he had. A yardstick or umbrella can substitute for a white cane.

7. TASTE TEST

EQUIPMENT: Related foods such as apple--pear; orange--grapefruit; 7-Up--Pepsi; Graham cracker--vanilla wafer

Have children try to identify these foods by tasting and smelling only, not by seeing or feeling. Have them talk about how much they could tell about the foods.

RESOURCES

BOOKS FOR CHILDREN

(P = Primary, M = Middle, U = Upper grade level recommendations)

Bowden, Nina. The Witch's Daughter. Philadelphia, PA: Lippincott Press, 1966. Jewel thieves on an island leave blind Janey, her brother, and a friend in a dark cave. Janey hears the way out. (MU)

Brom, Elizabeth. One Day I Closed My Eyes and the World Disappeared. New York, N.Y.: Dial Press, 1978. (P)

Charles, Ray and Mathis, Sharon Bell. Ray Charles. New York, N.Y.: Thomas & Crowell, 1973. Story of blind jazz musician who has many competencies. (MU)

Clewes, Dorothy. Guide Dog. New York, N.Y.: Coward Press, 1965. Roley finds it difficult to accept a seeing eye dog, because his blindness occurred from a dog lunging at him and causing him to drop an explosive package.(U)

Davidson, Margaret. Louis Braille, The Boy Who Invented Books for the Blind. New York, N.Y.: Hastings House Publishers, Inc., 1971 (MU)

Garfield, James. Follow My Leader. New York, N.Y.: Viking Press, 1957. Boy blinded by a firecracker finds help from a seeing eye dog. (MU)

Goodsell, Jane. Katie's Magic Glasses. Boston, Mass.: Houghton-Mifflin Co., 1972. Katie gets new glasses and sees the world in a different light. (PM)

Heide, Florence. Sound of Sunshine, Sound of Rain. New York, N.Y.: Parent's Magazine Press, 1970. Sensitive description of sounds and activities in life of a young black boy who is blind. (PM)

Kamien, Janet. What If You Couldn't? A book about special needs. New York, N.Y.: Charles Scribner's Sons, 1979. A good section on visual loss. (MU)

Keats, Ezra Jack. Apartment 3. New York, N.Y.: MacMillan Publishing Co., 1971. The story of a blind young man and how he makes music. (MU)

Keller, Helen. Any books on life of Helen Keller or Anne Sullivan.

Little, Jean. From Anna. New York, N.Y.: Harper and Row, 1972. A little girl isn't clumsy; she can't see and needs glasses. (PM)

McDonnell, Lois Eddy. Stevie's Other Eyes. New York, N.Y.: Friendship Press, 1962. This book for younger children has a main character who is blind. (P)

Micklish, Rita. Sugar Bee. New York, N.Y.: Delacarte, 1972. A black urban child feels uncomfortable about visiting a white rural family with a blind daughter. (MU)

Rounds, Glen. The Blind Colt and Stolen Pony. New York, N.Y.: Holiday Press, 1941, 1948. A blind colt is befriended by a young boy and a dog. (P)

Vance, Marguerite. Windows for Rosemary. New York, N.Y.: Dutton Press, 1968. A blind girl feels so lucky to get a typewriter for her birthday. (MU)

Wilder, Laura Ingalls. By the Shores of Silver Lake. New York, N.Y.: Harper and Row, 1956. (MU)

Witheridge, Elizabeth. Dead End Bluff. New York, N.Y.: Atheneum Publishers, 1966. Boy who was born blind is an athlete and rescuer of his younger brother. (M)

Witte, P.E. The Touch Me Book. New York, N.Y.: Golden Press, 1961. (P)

Wolf, Bernard. Connie's New Eyes. Philadelphia, PA.: J. B. Lippincott, 1976. (P)

Woody, Regina. Second Sight for Tommy. Philadelphia, PA.: Westminster Press, 1972. A teenager's first job is caring for a recently blinded nine-year-old boy. (U)

Yolen, Jane. The Seeing Stick. New York, N.Y.: Crowell, 1977. (PM)

BOOKS FOR ADULTS

Barraga, N. C. Visual Handicaps and Hearing. Belmont, Calif: Wadsworth, 1976.

DeMott, Richard. "The Visually Handicapped" in Behaviors of Exceptional Children. Editor Norris Harring. Columbus, OH: Charles Merrill Publishing Co., 1978.

Hanninen, K. Teaching the Visually Handicapped. Columbus, OH: Charles E. Merrill Publishing Co., 1975.

Henderson, Lois. Open Doors: My Child's First Eight Years Without Sight. New York, N.Y.: John Day, 1954. A mother's story of her son's early years.

Jan, J. E., Freeman, R. D. & Scott, E. P. Visual Impairment in Children and Adolescents. New York, N.Y.: Grune & Stratton, 1977.

Johnson, Ysabel. A Blind Child Becomes a Member of Your Class. New York, N.Y.: American Foundation of the Blind. A booklet designed for teachers.

Krents, Harold. To Race the Wind. New York, N.Y.: G. P. Putnam & Sons, 1972. An autobiography of a young man. The film "Butterflies are Free " is based on this book.

Monso, Lou et. al. Mainstreaming Preschoolers: Children With Visual Handicaps. Washington, D.C.: Dept. of Health, Education & Welfare, 1978.

Lowenfeld, Berthold. Our Blind Children: Growing & Learning With Them. Springfield, ILL: Charles C. Thomas, 1971. A book with facts and advice.

Lowenfeld, B. (Ed.) The Visually Handicapped Child in School. New York, N.Y.: John Day, 1973.

Martin, Glenda; Hoben, Mollie. Supporting Visually Impaired Students in the Mainstream. Minneapolis, MN.: Leadership Training Institute, 1977.

Payne, Kauffman, Patton, Brown, & DeMott. "Visual Impairment" in Exceptional Children in Focus. Second Edition. Columbus, OH.: Charles E. Merrill, 1979.

Raynar, Sherry & Richard Drouillard. Get a Wiggle On and Move It: Guides for Helping Visually Handicapped Children Grow. Ingham Intermediate School District, 2630 W. Howell Rd., Mason, Michigan 48854. 1975.

Scott, Eileen, Jan, J., Freeman, Roger. Can't Your Child See? Baltimore, MD.: University Park Press, 1977.

Spencer, Marietta. Blind Children in the Family and Community. Minneapolis, MN.: University of Minnesota Press.

Sullivan, Tom with Gill, Derek. If You Could See What I Hear. New York, N.Y.: Harper & Row, 1975. About the singer and entertainer who is blind--an autobiography.

Swieringa, M. See It My Way. Grand Rapids, MI.: The Institute for Development of Creative Child Care, 1973.

Ulrich, Elizabeth with Wolf, Ann W. M. I Love You. (Illustrated) Ann Arbor, MI: University of Michigan Press, 1972.

Ulrich, Sharon. Elizabeth. Ann Arbor, MI: University of Michigan Press, 1972. An excellent biography written by Elizabeth's mother. Early intervention ideas and comments by two experts are helpful.

Willoughby, Doris. (Ed.) Your School Includes a Blind Student. Baltimore, MD: Natl. Fed. of the Blind, 1978. The book provides helpful ideas for teachers.

Willoughby, Doris. (Ed.) A Resource Guide for Parents & Educators of Blind Children. Baltimore, MD: Natl. Fed. of the Blind, 1978.

FILMS

A School Day In The Life of A Visually Handicapped Child. (1970, black and white, sound, 24 min., #3158, $6.40) Available from PA. State Univ. Audio Visual Services. Order from 6 Williard Bldg., University Park, PA. 10602. A story about a nine year old girl.

Finding My Way (from Zoom series, 1975, 8 min., color, sound $9.55) Available from Audio Visual Library, Univ. of MN, 3300 University Ave. S.E., Mpls., MN 55414 (612) 373-3810. A boy who's blind learns independence by taking risks as he learns to get around by himself in his neighborhood. In his classroom he uses a Braille writer, a typewriter with a tactile alphabet and Braille.

From the American Foundation for the Blind, 15 W. 16th St., N.Y., N.Y. 10011.
Out of Left Field. (1973, 7 minutes, color, sound) Communities work to integrate vision impaired persons into leisure activities.
Some of Our Schoolmates Are Blind. (1960) Integration in a school in Temple City, CA.
What Do You Do When You See A Blind Person? (1971, 13 minutes, color, sound) Short and humorous film on "helping" a person who cannot see.

Happy Foward. Available from Seeing Eye, Inc., Morristown, N.J. 07960. A movie about the training of a seeing eye dog and her master.

Harold. (1978, 10 min., color, sound $10.35) Available from Audio Visual Library, Univ. of MN, 3300 Univ. Ave. S.E., Mpls., MN 55414 (612) 373-3810) A 14 year old boy talks of his anger at becoming blind but how he has come to understand his limitations and his enthusiasm about the future.

Helen Keller. (1969, 15 min., color, sound) Available from McGraw Hill Films, 1221 Ave. of the Americas, N.Y., N.Y. 10020.

Striving For Independence. (1968, 26 min., color, sound) Available from McDonald-Douglas Corp Film Library, Dept. 92, Bldg. 240, P.O. Box 516, St. Louis, MO 63166. Shows how blind persons overcome their handicaps and realize their ambitions.

The World of Deaf-Blind Children: How They Communicate. (1974, 29 min. color) Available from Campbell Films, Academy Ave., Saxtons River, VT 05154.

The Blind: An Emerging Minority. (20 minutes, color) The film discusses blind Americans today and explains the role of the National Federation of the Blind in meeting these challenges. Available from N.F.B., 1346 Connecticut Ave. N.W., Washington, D.C. 20036.

ORGANIZATIONS

American Association of Workers
for the Blind
1511 K Street N.W.
Washington, D.C. 20005

American Brotherhood for the Blind
1800 Johnson St.
Baltimore, MD

American Foundation for the Blind
12 W. 16th St.
New York, N.Y. 10011

They publish many pamphlets - some with up to 50 copies free.

American Printing House for the Blind
1839 Frankfurt Ave.
Louisville, KY. 40206

Write for a free sample copy of the "Weekly Reader" in Braille.

Association for Education of the Visually Handicapped
191 Walnut St. - Fourth Floor
Philadelphia, PA. 19107

National Association for the Visually Handicapped
305 E. 24th St.
New York, N.Y. 10010

National Braille Association
85 Goodwin Ave.
Midland Park, N.J. 07432

National Federation of the Blind
1346 Connecticut Ave. N.W.
Washington, D.C. 20036

Perkins School for the Blind (Howe Press)
175 N. Beacon St.
Watertown, Mass. 02172

They have a brochure about their school.

Scouting for the Visually Handicapped
3063 Supply Division
Boy Scouts of America
North Brunswick, N.J. 08902

State organizations and agencies are listed in Additional Resource Section at end of packet.

HEARING IMPAIRMENT

WHAT IS A HEARING IMPAIRMENT?

Hearing impairment is the term used to describe the wide range of hearing loss in persons, whether temporary or permanent, slight or profound. It is important to remember that while profound deafness is the most dramatic form of hearing impairment, the vast majority of hearing impaired people have some usable hearing. There are many more hearing impaired individuals who are "hard of hearing"--who can receive information by hearing alone--than there are who are "deaf"--who must rely on visual means to receive information.

Some degree of hearing loss occurs among 14.5 million people in the United States. According to 1982-83 Minnesota Child Count, there are 1,548 hearing impaired children receiving special education services.

There is great variety among hearing impaired persons. Even with similar hearing losses persons may differ enormously in intelligence, personality, interests and even in terms of their ability to speak and listen.

Hearing loss is often called an "invisible" handicap. Even if a person's hearing aids are visible, his or her behavior may seem exactly like anyone else's. He or she may smile and nod appropriately and give the impression that everything is understood. Yet the effects of hearing loss intellectually and socially may be enormous.

Following are some of the more frequently used terms and issues involving hearing impairments:

Degree of hearing loss. Two frequently used terms in discussing people with hearing losses are "hard of hearing" and "deaf." "Hard of hearing" is generally used to describe a loss of hearing not severe enough to interfere with the use of hearing as a primary channel for learning or understanding speech with or without amplification. "Deaf" is used to describe a hearing loss so severe that a person is unable to understand speech through hearing alone but must also rely on visual method or methods--like speechreading (lipreading) or manual communication.

Public Law 94-142 defines deaf as "a hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance." Hard of hearing means "a hearing impairment, whether permanent or fluctuating, which adversely affects a child's educational performance but which is not included under the definition of 'deaf' above."

Unfortunately, both of these terms are frequently used imprecisely. Moreover, modern hearing aids enable many persons who would formerly have been deaf to become functionally hard of hearing. Even more important, the terms may obscure the fact that people with hearing losses can hear far better in some situations than others. A large number of individuals are hard of hearing in small quiet rooms with one or two people but effectively deaf in noisy, group situations. The term "deaf" is also used by many adults with impaired hearing to describe adult deaf persons who often use sign language, although a number of them are actually hard of hearing by measurement.

Inappropriate terms used frequently by persons not well acquainted with this disability are "deaf and dumb" and "deaf mute". The use of either term should be discouraged.

Measurement of hearing loss. Hearing loss can now be measured by sophisticated equipment administered by a trained audiologist. The hearing loss of babies and very young children can be determined with a fair degree of accuracy. Hearing loss is expressed in terms of decibels--measuring the intensity of a pure tone of sound. A mark is made on a graph at the point where the person can barely hear the sound at a given pitch. A loss of 20 decibels (dB) would be mild; a hearing loss of 75 dBs would be considered severe. (The criterion for noise pollution is a noise level of about 70 dBs.) Hearing can be measured up to about 110 decibels. The audiogram shows also which frequencies (Hz), which pitches of sound, can be heard and at what intensity. This is important because of the pitches of human speech.

Kinds of hearing impairment. There are two main kinds of hearing impairment: conductive hearing loss and nerve (sensorineural) hearing loss. A conductive hearing loss is caused by a problem in the outer or middle ear that reduces the intensity or loudness of sound. Fluid in the middle ear, damage to the eardrum, and hardening of the small bones in the middle ear are frequent causes of conductive hearing loss. Conductive hearing loss often responds to medication or surgery. If it cannot be corrected medically or surgically, a conductive hearing loss can often be overcome very successfully with the use of a hearing aid. A conductive loss may interfere greatly with the understanding of speech but it does not cause profound deafness.

Nerve or sensorineural hearing loss is the result of damage to the auditory nerve itself which carries sound impulses to the brain. Nerve hearing loss is not treatable medically or surgically at this time, although an experimental procedure may provide very gross sound perception for people who are totally deaf. Nerve hearing losses range from a very mild loss to the most profound deafness.

Nerve hearing loss may cause problems over and above those caused by conductive loss. Nerve loss may produce distortion of sound. A person may hear a sound, but if the sound is amplified it is so unclear or garbled that it is not recognizable. Second, because of the nature of the auditory nerve, a person with some nerve deafness frequently hears low-pitched sounds much better than higher-pitched sounds. This is unfortunate since the sounds necessary to understand human speech are in the middle and upper pitches. Moreover, the sounds necessary to distinguish consonants are higher pitched than vowel sounds; yet it is the ability to discriminate among consonant sounds that makes English speech comprehensible.

Some nerve losses may be so great that a person is unable to hear anything even with the strongest amplification available. There are many fewer persons with profound nerve deafness than with more moderate nerve losses. Many individuals with nerve hearing losses profit enormously from hearing aids. They are able to use their residual hearing to a great extent.

Hearing losses may be caused by genetic tendencies. Persons with progressive hearing loss in later life as well as children born with impaired hearing may both inherit their hearing loss. Hearing loss may be caused by a trauma to the developing fetus. It may result from injury at birth. Until the invention of the vaccine against rubella, a number of babies were born deaf because their mothers had contracted German measles while they were pregnant. Deafness in children may also result from illnesses such as meningitis and, less frequently now, from red measles and scarlet fever. Some life-saving drugs also cause deafness. The cause of hearing impairments in many children, however, remains unknown.

The age at which hearing loss occurs is very significant. One very important distinction between individuals with hearing loss, and the effect of that hearing loss on their overall development, is the age at which the hearing loss occurs. If a substantial hearing loss occurs before speech and language is acquired normally, the person is said to be prelingually deaf. In this case the person's whole development, his or her perception and language, is dramatically affected. If a person becomes deaf after acquiring language, particularly after he or she is an adult, the effects on language and knowledge are much less severe, even though that person may be more hearing impaired than one whose hearing loss occurred at birth.

WHAT IS AUDIOLOGY?

The science of modern audiology, the measurement of hearing and the development of modern hearing aids, dates from the effort to rehabilitate hearing impaired veterans after World War II. Systematic early fitting of young hearing impaired children with appropriate hearing aids dates only from the 1950's. Today infants as young as a few months may be fitted with body aids. Recent miniaturization of hearing aids has permitted many persons with severe or profound losses to wear behind the ear hearing aids; 20 years ago they would have all had to wear very bulky hearing aids which would have been less effective.

Modern hearing aids are marvelous helps for many individuals. They permit hard of hearing people to approach normal hearing in many situations. They enable other people, who would otherwise be deaf, to become functionally hard of hearing in some situations.

However, it is important to recognize that hearing aids have a number of limitations. They do not do for poor hearing what eyeglasses often do for poor eyesight.

Hearing aids are delicate and can frequently malfunction. They depend on batteries; toward the end of a battery's life hearing aids become less powerful. The earmold, the custom fitted piece which fits into the ear, is often hard to fit exactly, particularly if the hearing aid is powerful and if the person is a small child.

There are other even more serious limitations. Hearing aids amplify noises in the environment as well as speech, making it very difficult to discriminate speech sounds. In some cases environmental sounds can be unpleasantly loud. A hard of hearing person may be delighted to hear a pin drop, but a fork dropping may sound like a loud crash. A hearing aid user may hear clearly in a quiet room with one or two people, but be unable to hear in a loud room with many people talking at once--a factory, or a school lunchroom, or a noisy bus terminal.

Secondly, hearing aids become less effective with distance. If a speaker is more than 3 or 4 feet from the hearing aid microphone, the aid begins to lose effectiveness. The FM Auditory Trainer (used in many schools and often referred to by its trade names as a "Phonic Ear," "Telex," or "Oticon") overcomes this problem to some degree: the speaker's voice comes in more clearly than environmental noises and always operates at the most desirable distance from the wearer's hearing aid. The teacher or speaker wears what looks like a microphone but is actually an FM radio transmitter; the student receives the signal on a receiver worn on the chest or belt.

Hearing aids, sometimes with lipreading and/or sign language, are invaluable for many hearing impaired children since they can learn some speech through hearing rather than through just visual means.

WHAT ARE THE MEANS OF COMMUNICATION?

Speech. The development of clear speech, a primary goal for all children, is very difficult for hearing impaired children. Those who are born with the ability to hear, but who acquire a hearing loss after the age of three when some language has already been established, have a language/speech base that can be built upon.

However, if the loss is "prelingual," if the child is deaf from birth or infancy, the task of establishing speech and of understanding language are much more difficult. The child may never hear a voice, not even his own. Many prelingual severely hearing impaired persons can develop speech skills, and in some cases, very excellent speech ability. Deaf and hard of hearing children require much help from a speech therapist in the development of their speech.

Lipreading (or speechreading) is very useful to many hard of hearing and deaf persons. It is far easier to lipread if one has some residual hearing so that he or she can combine auditory and visual clues.

Unfortunately, it is impossible for anyone to accurately lipread all single words in the English language. Many sounds in English look identical on the lips. The sentences "My sister was married" and "My sister was buried" look exactly the same. Successful lipreading depends on making intelligent guesses in context. It is much easier to lipread if a person is familiar with the topic being discussed. Also, lipreading needs to be supplemented by a speaker's expression. Some people are almost impossible to lipread--persons with foreign accents, persons with untrimmed moustaches and/or full beards, persons who move their lips very little and persons whose facial expressions do not change very much. In environments where there are many visual distractions, where light shines in the face of the hearing impaired person, or where many people are talking at once, as in a lively discussion, lipreading is very difficult.

Sign language. Some hearing impaired persons communicate with the language of signs, with or without speech.

Two forms of manual communication are used by hearing impaired people. Finger spelling is the spelling of English words by the use of a one-handed manual alphabet. Finger spelling is most frequently used for technical words and proper names. Sign language is a language where hand positions--frequently using both hands--represent different concepts or words.

Sign language is very conceptual; one sign may represent several different words. There are different sign languages. American Sign Language (ASL or Ameslan) is a separate language of its own. Its word order, syntax, and grammar are different from English. It is used by many adult deaf persons. In school classrooms a form of sign language called. Signed English (or Siglish or SEE) is used to teach hearing impaired children. English word order is used with contractions, word endings, and verb tenses. Signed English is important for helping children gain a mastery of reading and writing the English language.

Methods of education for hearing impaired children. Two general methods of teaching are used for hearing impaired children. Total communication, or the simultaneous method, combines finger spelling and signing with lipreading, speech skills, and the use of residual hearing. The oral/aural method focuses on speech, residual hearing and lipreading. In both methods, emphasis is put on an early mastery of written English. Since the development of improved hearing aids and the fitting of children with hearing aids as soon as possible, a number of children who once would have been termed profoundly deaf are able to incorporate the use of residual hearing in the learning process, especially in small classes with trained teachers.

However, there are enormous differences among children, even with similar hearing losses, in their ability to benefit from the use of hearing aids and lipreading. Lipreading is partly a talent; many highly intelligent children and adults learn best through sign language.

Some hearing impaired individuals with excellent oral skills add signing as they grow older. Other persons who are quite deaf feel comfortable relying totally on oral/aural methods.

WHAT PROBLEMS ACCOMPANY HEARING LOSS?

It is obvious that a hearing loss causes a person to not hear, or to misunderstand, spoken language and other sounds. Other problems which accompany hearing loss are less well understood.

Language Difficulties. The problem that profoundly deaf people have in speaking clearly is obvious. Less obvious, but perhaps more important, is the language problem associated with hearing impairment. Recent studies show that even temporary conductive hearing losses in children below the age of 4 can cause permanent language deficits.

The most efficient time for language acquisition is from birth to 4. Children with greatly reduced hearing sometimes reach the age of 5 or 6 with almost no language. Even with early education and the teaching of communication strategies to young hearing impaired children, there are apt to be serious language problems. Difficulties in mastering the English language include limited vocabulary, grammatical problems, difficulties in producing or understanding long sentences, particular problems with written language and difficulties in reading comprehension. One might assume that deaf persons could compensate for their lack of hearing by extensive reading; in fact the language problems many prelingually deaf persons face make reading for information very difficult. This language deficit often places limits on educational and employment opportunities.

Language deficits also make it more difficult to understand speech. What is sometimes interpreted as an inability to hear speech or a certain sentence may really be an inability to understand the vocabulary or idiom which is being expressed.

Early diagnosis and early educational opportunities for hearing impaired children attempt to address these critical language problems. Total communication enables some children to develop language at a very early age. Most educational programs for hearing impaired children focus heavily on the teaching of language.

Background information. Another significant deficit for many hearing impaired people is the lack of background information. Even hard of hearing persons have difficulty "overhearing" conversations or information. Persons with very severe hearing losses miss out on the radio, on TV (especially if there is a voice over), and on casually imparted information. Incidental information which most people acquire almost unconsciously is simply not received. And the language problems of many prelingually hearing impaired people make it difficult to compensate for this lack through voracious reading. What is sometimes mistaken for low intelligence or naiveté on the part of hearing impaired persons is in fact frequently a result of gaps in information. Many subtleties are lost or misunderstood.

Social Isolation. If language problems and gaps in information are problems faced mainly by prelingually hearing impaired persons, virtually all hearing impaired people experience feelings of social isolation. A hearing loss tends to separate an individual from other people. Even persons who have enough hearing to understand perfectly in one-to-one situations may be almost totally lost in noisy groups or casual encounters. They miss almost all the "small talk" or chatter going on around them all the time.

This failure to understand casual conversation clearly is compounded by the embarrassment many hearing impaired persons feel at having to repeat themselves because their speech is not understood. Many become reluctant to join in on conversations for fear they may have misunderstood what is going on and thus may make an irrelevant comment.

The social isolation hearing impaired people feel is not just the unhappiness that comes from being "different" or wearing hearing aids. They are truly "out of it" in many conversations and social gatherings. For hearing people to genuinely include hearing impaired persons, it is not enough to not exclude them; it is frequently necessary to make an extra effort to include them.

This information on Hearing Impairments was written by Barbara Flanigan, a member of the PACER Center Board of Directors and the parent of a hearing impaired child.

DEAF-BLIND

WHAT IS DEAF-BLINDNESS?

Occasionally children may have both a hearing impaired and a vision impairment. When this requires a special type of educational program, P.L. 94-142 regards it as a separate educational category.

Deaf-blind is defined as "concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs solely for deaf OR blind children."

Deaf-blind children are taught to communicate by using sign language spelled directly into the palm of the hand.

AIDS AND APPLIANCES FOR HEARING IMPAIRED INDIVIDUALS

Aids and appliances commonly used by hearing impaired persons are listed below. However, not all persons would use all of the items mentioned.

Hearing aid:	An instrument that increases the volume of all sounds. It may be worn on the body, behind the ear, or sometimes attached to glasses. Aids may be used for one ear or both. (See hearing aid information on page 39)
Auditory trainer:	A receiver is worn by the child, while a microphone is worn by the teacher or parent. The voice of the speaker, but not the background noise, is amplified.
Phonator:	A vibrator is placed in the hand of the child so that speech sounds going into an attached microphone can be "felt" by the child.
Communication devices:	Many hearing impaired persons are increasingly taking advantage of other electronic devices which help to bridge the communication gap. Special telephones for hearing impaired persons, TDD's (telephone devices for the deaf formerly called TTY's) enable persons to use telephones for communicating written messages to others with similar devices. Answering services which enable hearing impaired people to have calls made to hearing persons with regular phones (doctors, employers, etc.) are being developed. Finally, since March 1980, it has been possible to buy TV adapters which decode closed captions on some TV programs.

FEELINGS ABOUT BEING DEAF

In Feeling Free (Addison-Wesley Press, Reading, MA, 1979) a boy and a girl hearing impaired describe their thoughts about being deaf and dealing with communication problems. Gordon says:

> "I know that people are curious about what it's like to be deaf, and I don't mind it when they ask me all their questions. I just wish they would stick around for the answers. When I have something really important to say, I can make myself understood one way or another.
>
> My brother Chris isn't deaf, and we fool around just like any two brothers. Sometimes we like each other and sometimes...well, you can't like someone all the time, can you?
>
> Chris doesn't know how to use sign language as well as I do or as well as my mother does. But, when we have something to say to each other, we can usually make it happen. I have a lot of ways to make myself understood. I can use speech a little, but mostly I use sign and fingerspelling. But there are also a lot of expressions--smiles and frowns and acting things out--that can help me tell him what I'm thinking or how I'm feeling or what I want to do.

When I go into a restaurant or when I'm walking somewhere with my mother, I usually notice people looking at me. Sometimes they are pointing and other times they're imitating my sign language and making fun of me. I guess people aren't used to seeing sign language, but I am confused about why they act fresh.

It makes me a little angry when I see people staring at me, but I've just learned to say, "So what? Big deal!" and go on my way. I know that I'm not going to be able to change everybody in the world.

Sometimes people even think I'm drunk. That's because they hear me trying to speak, and it sounds to them like funny words and strange sounds. Or else, someone might come up to me and say "How are you!" but since I can't understand them, I don't say anything. So they think I'm drunk.

But hearing people just ignore me sometimes. It's like they won't take the extra time to listen to me or to understand my questions. That makes me feel as if they just don't care at all.

When I just happen to meet up with someone new, it can be pretty frustrating. That person doesn't know that I'm deaf, and I really can't read his or her lips so neither one of us can understand the other. I'll usually find a pencil and write "I'm deaf" and then at least the other person will know what's going on. But it's hard to carry on a conversation like that for very long, so usually I'll just say "so long" and go on my way. It's not that I don't want to stay and talk with the other person or try to be friends, but it's just hard--hard for both of us. That's why I wish everybody knew how to use signs."

Kim, who relies on lip reading for communication, states:

"One of the hard things about learning to read other people's lips is that a lot of words look so much alike. This happens all the time with words for questions, like "what," "where," and "why"--they all look the same when people speak them. Also people sometimes talk too fast for me to understand what they're trying to tell me, so I have to keep asking them to slow down and repeat things.

A lot of times, when I'm with a group of people, it seems like everyone is talking at the same time--and very quickly--so I start to feel a little left out. I really want to know what they're all saying and I try hard to understand. Usually, though, I'll ask one of the kids near me to help me out and it isn't a big problem.

*Reprinted from FEELING FREE, © 1979, American Institutes for Research by permission of Addison-Wesley Publishing Company, Inc., Reading, Mass. 01867. All Rights Reserved.

> "It doesn't seem to make any difference to my friends that I'm deaf. They treat me pretty much like anyone else. And I'm meeting a lot of new kids in school and making more friends all the time. I don't really know how it happens, but it happens pretty fast."*

PUPPET USED TO PORTRAY DEAFNESS

The puppet who depicts deafness is operated by two people. One person slips their hands and arms into sleeves so that actual sign language can be used. The other person operates the head and mouth movements.

The puppet wears a body aid and has a receiver "button" in his ear. Although profoundly deaf, the puppet communicates with speech and sign langauge and can lipread. The puppet's speech is somewhat difficult to understand.

QUESTIONS OUR PUPPET HAS BEEN ASKED

DO YOU ALWAYS WEAR YOUR HEARING AID?

> Oh yes, whenever I'm awake. But I don't wear it when I swim, take a bath, or sleep. Sometimes when I'm in a room that's very noisy, I turn it off because sounds get so loud and garbled.

CAN YOU PLAY OUTSIDE EVEN THOUGH YOU CAN'T HEAR WHAT'S GOING ON?

> Sure, I just have to WATCH out for things--like frisbees, baseballs, and cars. Some things I can feel--like thunder, or a heavy truck rumbling down the road. I'm very careful when I cross the street--I look very carefully both ways.

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CAN YOU HEAR SOUNDS IN YOUR HOUSE?

Some sounds--even some speech--I can hear, but I have to listen very hard. Some sounds I can feel--like the stereo. If it's very loud, I can also hear it--or the radio--even the vacuum clearner. If mom wants my attention, she stamps twice on our wooden floors and I turn around. But I can't hear the doorbell or telephone. We have lights that flash for those. We have a sign on the doorbell asking that the person rings it 10 times rapidly. That's so I can tell if it's the phone or the doorbell.

CAN YOU USE A TELEPHONE?

If the light for our phone flashes, I just pick up the phone and say, "Hello, wait a minute please." Then I go get someone, usually one of my sisters (the phone is usually for one of them any way), and then they pick up the phone and find out who it's really for. So no, I can't hear on a regular phone...but...

When I'm 10, mom and dad said I can have a TDD--that's a special telephone--tele-typewriter for persons like me. Then I can call and type to any of my friends who have a TDD, too.

HOW DID YOU LEARN SIGN LANGUAGE?

Just like you learned speech. My family and teachers (I started having teachers come to my house when I was just a year old) would name everything I saw or wanted and use signs all the time, and I learned.

HOW COULD YOU LEARN SPEECH IF YOU CAN"T HEAR YOUR VOICE?

My family always talks to me, too, and sometimes I catch a bit of sound from my dad's deep voice. But it's really hard. My speech teacher and I have worked a long time and I would sit in front of a mirror to see the shape of my mouth. I also would feel my throat and nose to feel vibrations.

ON TV, WHAT DOES "CLOSED CAPTIONED FOR THE HEARING IMPAIRED" MEAN?

Captions are printed words at the bottom of a TV screen to give information or to explain what is going on. You've probably seen captions for weather bulletins at some time. Well, closed captions show only on TV screens of people who buy "decoders" for their TV. Deaf people like TV decoders so they can fully understand the programs through the captions. Some special TV's have built-in decoders.

DO YOUR EARS HURT?

No. Being deaf isn't painful. It's just that my ears don't get the sound waves to my brain like yours do.

SIMULATION ACTIVITIES FOR HEARING IMPAIRMENTS

1. "SILENT MOVIE"

EQUIPMENT: A cartoon or short film unfamiliar to class.

For elementary students: Run the film in its entirety without sound. Let class discuss what they thought went on, or have them write their ideas on what happened or what was said in the film. Then rerun the film and have children compare their notes with what actually happened. Discuss their feelings about not being able to hear.

For preschoolers: If the class has a TV, turn sound off for one minute of Sesame Street and see if they can tell what is going on.

2. "SILENT TIME" or "SILENT MEAL"

EQUIPMENT: None

Designate a portion of the day (such as 1 hour) when no one can talk. To get something, they have to gesture. To understand, they have to read lips. To express a thought, they may have to act out or dramatize. (Do not allow students to communicate by writing notes--that's too easy.) Discuss which things were easy to communicate and which were difficult.

3. RECORDS THAT SIMULATE SOUNDS AS HEARD BY HEARING IMPAIRED PEOPLE

"HOW THEY HEAR: the sounds of ABNORMAL HEARING" (Written and narrated by Earl Harford, Ph.D., produced by Stowe and Associates) simulates several types of abnormal hearing.

Check with your school or district librarian, or special education resource center to learn if the record is available.

4. "CATCH THE WORDS"

EQUIPMENT: Chalk and eraser for leader or teacher, paper and pencils for the children.

The leaders, without talking, should write a word or sentence on the board, erasing each letter as soon as it is written. The students must write the same word or sentence on their papers. Have them discuss how complete the word or sentence is on their papers and the difficulties they may have felt in trying to catch by sign everything that was printed. Repeat the activity, this time with the leader saying aloud each letter or word as it is printed. Does "hearing" make the activity easier?

5. "PANTOMIME"

EQUIPMENT: None.
Discuss how signs are used in many instances to give information: traffic cops, sports umpires, airline personnel. Have each child convey some action or information without using words: brushing teeth, putting on a coat, pouring a glass of milk, etc. Act out a familiar story.

RESOURCES

HEARING AID INFORMATION FOR TEACHERS AND PARENTS

THE DIFFERENT TYPES OF HEARING AIDS

The purpose of any hearing aid is to amplify and reproduce sound in order to enhance a person's hearing. Amplified sound is louder than unaided sound; a sound occurring 10 feet away may seem like it is 4 feet away when heard through a hearing aid. The major visible differences between hearing aids are the size and the place where they are worn. Larger aids must be worn on the chest and are referred to as body-type aids or the conventional hearing aid. These aids are held in place by a pocket or strap-like harness which is worn over or under clothing. Ideally, a body type aid should be worn over the individual's clothing. A cord of varying length (2 feet to 3 feet) connects the body aid to a receiver and earmold which fit in the ear.

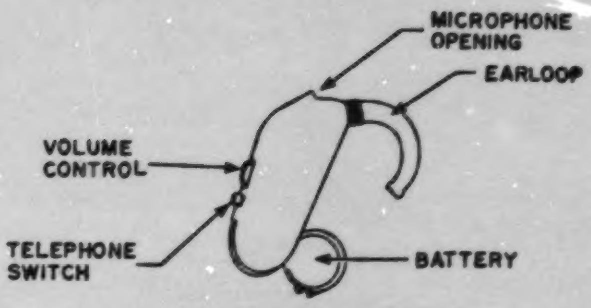
Smaller aids are worn on the head, specifically, behind the ear, in the ear, or in a pair of eyeglasses. A person may wear one aid or two aids. Most children wear behind the ear aids as opposed to in the ear or eyeglass hearing aids.

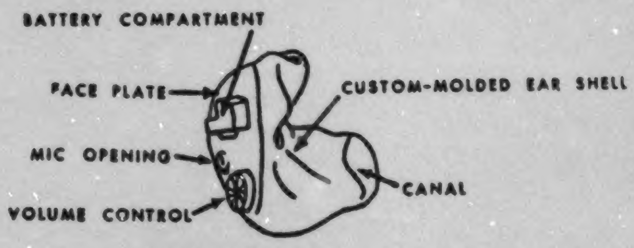
The type of aid that a child wears should be determined by an audiologist. This person is qualified to evaluate hearing impairment and make recommendations for habilitating the hearing loss which may include wearing a hearing aid(s). There is a federal law (801.420) and a Minnesota State Statute which stipulate procedures for the sale of hearing aids. Both of these laws stipulate that a person with a hearing loss must have a medical evaluation by a licensed physician before purchasing an aid. In addition, children with a hearing loss should be directed to an audiologist. NO hearing aid dealer may sell a hearing aid to a person without a doctor's prescription. A waiver to this ruling can be signed by persons over 18 years of age and under 60 years (this age specification was established in the state law), if the dealer reads to that person the specific requirements in the Federal Register of February 15, 1977. Therefore, no child should ever be wearing a hearing aid that has not been specifically recommended by an audiologist and a physician.

The following sheet will provide valuable information on the parts of hearing aids. These diagrams should help one visualize what an aid looks like. This is the first step in getting acquainted with the instrument that you may be responsible for maintaining.

Written by Christine Painter,
Audiologist

PARTS OF THE HEARING AID

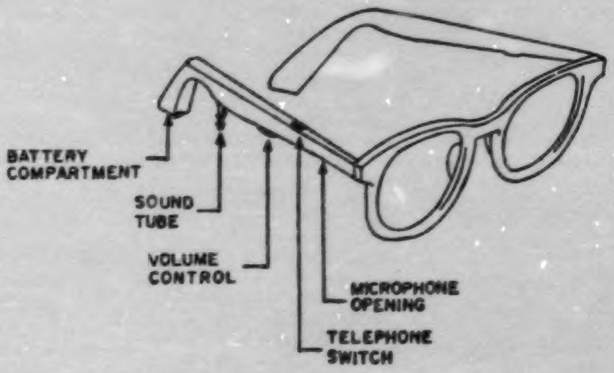

MICROPHONE OPENING
EARLOOP
VOLUME CONTROL
TELEPHONE SWITCH
BATTERY


BATTERY COMPARTMENT
FACE PLATE
CUSTOM-MOLDED EAR SHELL
MIC OPENING
CANAL
VOLUME CONTROL

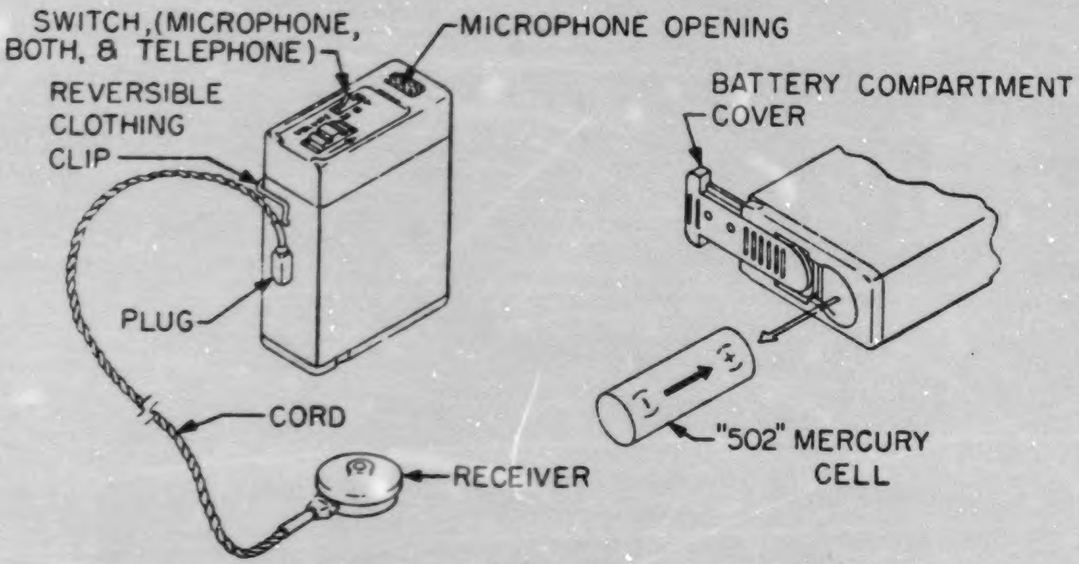
CUSTOM-MOLDED IN-THE-EAR

Behind the ear (BTE) - This aid is appropriate for a wide range of hearing losses.

In the ear (ITE) - This aid is appropriate only for mild and moderate hearing losses.

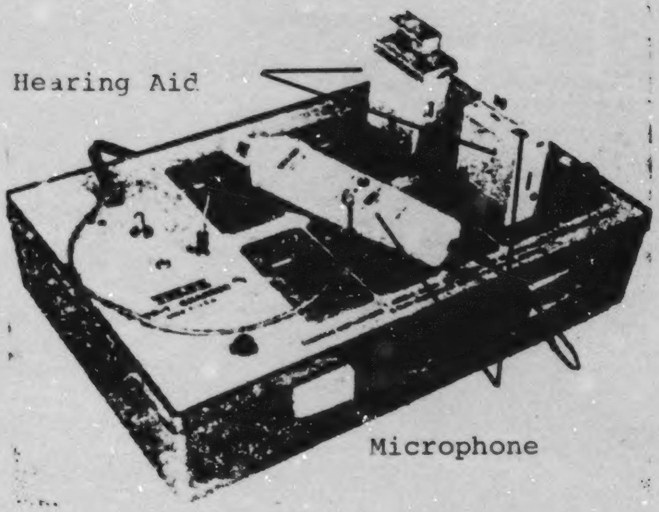

BATTERY COMPARTMENT
SOUND TUBE
VOLUME CONTROL
MICROPHONE OPENING
TELEPHONE SWITCH

Eyeglass hearing aid - This aid is most frequently worn by older adults.

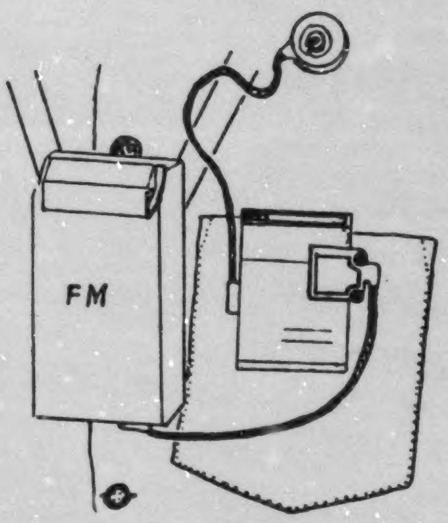

SWITCH, (MICROPHONE, BOTH, & TELEPHONE)
MICROPHONE OPENING
REVERSIBLE CLOTHING CLIP
PLUG
CORD
RECEIVER
BATTERY COMPARTMENT COVER
"502" MERCURY CELL

Conventional or body-type aid - This aid is appropriate for moderate, severe, and profound hearing losses. This aid is usually worn at chest level.

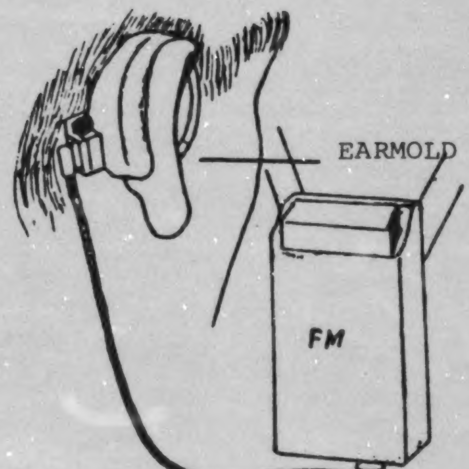
PARTS OF THE HEARING AID



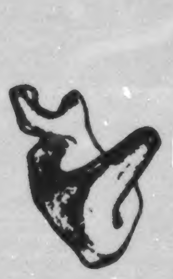
Example of an FM auditory training system - This system has three essential parts: a microphone worn by the teacher or other speaker, body-type aids that are adjusted for each child's particular hearing loss, and a box or tray which holds the aids and microphones as well as charges them over night.



An FM Auditory Training system may be used with a child's personal behind the ear aid or body-type aid.



Earmold - The earmold is a separate piece on all types of aids except the in the ear aid. It attaches to the earloop of the behind the ear aid, the receiver of the body aid, and may attach to the sound tube of the eyeglass aid.



ACTUAL SIZE

WHO MAINTAINS THE HEARING AID?

Most hearing impaired children will utilize some form of amplification. It is essential that the hearing aid is working optimally during school hours. Younger children will not always be able to monitor and check the functioning of their aid.

Part of the new federal law, Public Law 94-142, states that the school district shall insure that hearing aids are functioning properly. A hearing aid is not a complicated instrument. Learning how to care for a hearing aid does not require one to know how it works mechanically. In addition, the maintenance of a hearing aid should not be the sole responsibility of the classroom teacher. Therefore, the classroom teacher should know the following:

1. Who is the resource person in the district responsible for maintaining records and any additional equipment being utilized for the child with a hearing impairment: teacher of hearing impaired, principal, special education director.

2. The parts of a hearing aid and also the different types of hearing aids commonly worn by children.

3. The manner of checking a hearing aid by listening to the instrument and by observing the auditory behavior of the child.

It is possible that there will be no staff person within the school building who knows more about hearing aids than the classroom teacher. However, there will be someone within the school district who was initially responsible for ordering an auditory training system and thus should be familiar with the maintenance necessary to keep the aids functioning properly. Any team member who has direct contact with the child, e.g. speech pathologist, hearing impaired specialist, or parent, shares the responsibility of maintaining the hearing aid. These people are valuable resources for gaining information about hearing aids and hearing impairment.

Here is a list of some general "do's" and don'ts" about any hearing aid:

1. Do not get the hearing aid wet, e.g. a body aid would need a plastic cover for water play activities.

2. Always turn the aid off when it is not being worn.

3. Do not take the aid apart and attempt to repair it.

4. Do not place the aid in extremely hot or cold places, e.g., do not place an unworn aid on a heater.

LISTENING CHECK FOR A HEARING AID

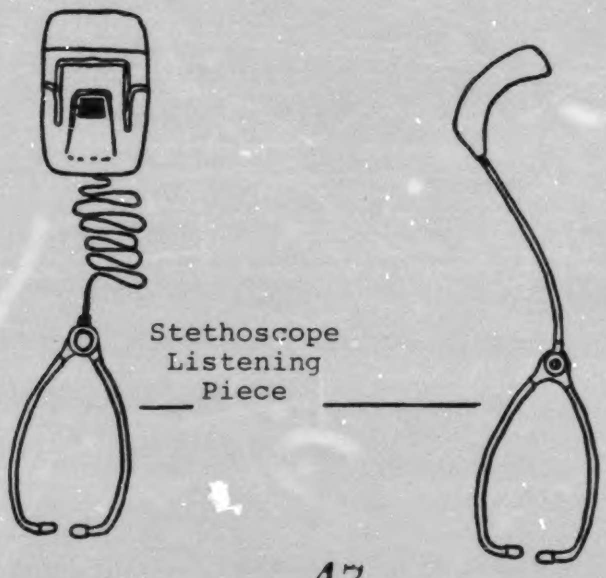
A listening check for a hearing aid should be done whenever a teacher suspects that a hearing aid does not work. This implies that the teacher can "see" that the child cannot "hear." There are, therefore, a few things that a teacher should know about the individual hearing impaired child.

1. Does the child know how to put on his/her aid?
2. Does the child know when the aid is off or on?
3. Does the child follow directions without looking at you?
4. Does the child know how to change the battery in her/his aid?
5. Does the school have spare batteries for the child's aid?

If the answers to the above questions are "yes," then it will be easier to spot an aid that is not functioning properly; it is likely that the child will tell you that his/her aid is dead or not working. It is important that the teacher know what is normal listening behavior for the child. If the child seems unusually inattentive or unusually moody, it would be advisable to make a listening check with the hearing aid.

LISTENING CHECK WITH A CONVENTIONAL HEARING AID:

1. Please the earmold and receiver in your ear or use a stethoscope listening set. This piece can be purchased by the school district from a hearing aid dealer for approximately $12.00. If you are listening with only the earmold and receiver, put your hand over your ear and hold the main part of the aid away from your ear to prevent feedback. Feedback is the squealing or whistling sound that is heard when an aid is on but the mold is not in the ear.



2. Turn the aid on slowly and move the volume control wheel up slowly. Listen for:

    a. A significant uniform increase in the sound of your voice and/or the sounds around you.

    b. Clarity in the amplified sound as you speak into the microphone, i.e. saying the sounds ba-ba-ba and counting to ten.

3. The following "sounds" indicate that the aid may need an additional check by an audiologist and/or repair by a dealer.

    a. Fuzziness in the sound of words, particularly words seven and six.

    b. Squealing sound in the aid when you have it sufficiently held to your ear; most often a squealing aid is indicative of an improperly fit earmold. However, if the squealing or whistling persists even with your finger held over the hole at the end of the earmold then the aid may need servicing.

    c. Absence of sound is usually indicative of a dead battery. If using a fresh battery produces no amplified sound. the aid should be sent home with instructions for repair and/or an additional opinion by an audiologist.

LISTENING CHECK WITH AN AUDITORY TRAINING SYSTEM:

The checks made with this system are quite similar to that of the conventional body aid except for one difference--this system necessitates checking two microphones (see parts of a hearing aid).

The hearing aid portion of this system will have switches which indicate what microphone is being utilized.

M - hearing aid microphone
T - microphone held by teacher
B - both microphones are activated.

The letters on the unit may be different from the example above. It is important that you know on which switch the hearing aid is operating.

Check the M Switch: Listen exactly as you would with a conventional body aid.

Check the T Switch: Talk into the hand held microphone and follow procedure of conventional check.

Check the B Switch: Talk into each microphone separately and be sure they are amplifying sound. Listen in the same manner described for conventional aids.

This type of equipment must be recharged daily and must, therefore, be turned on appropriately at the end of the school day. In some cases the individual child for whom this equipment was purchased can be taught to be responsible for turning on the equipment before leaving school. If this equipment is owned by the school, it is their responsibility to have it repaired if it "fails" the listening check. It is important that the classroom teacher know the procedure for reporting faulty equipment in that particular school building.

LISTENING CHECK WITH AN EAR LEVEL AID:

This check is sometimes difficult because the incidence of feedback is increased by the proximity of the microphone to the sound opening of the earmold. Therefore, it is strongly suggested that a stethoscope listening set be utilized (see page). Using a stethoscope, the listening check would proceed the same as with a conventional aid. If there is not a stethoscope available, then the listening check will have to be done by placing the earmold into your ear and placing your hand or finger over the mold to insure a tight seal. Sometimes the child's earmold will fit the listener's ear securely enough for an accurate check.

However, remember that if the earmold does not fit tightly, there will be feedback; this feedback or squealing will not be indicative of a malfunctioning hearing aid.

CARE OF THE EARMOLD:

Some children who wear hearing aids will maintain the earmold by washing it appropriately at home. If this is not done, then the classroom teacher could check for wax accumulation in the earmold canal tip. A plugged opening will reduce the amplification of the aid significantly, and the child may act as though he does not hear. A plugged earmold may also produce a squealing feedback sound. If the opening is plugged, simply remove the wax with a toothpick, pin, or pipe cleaner. If the earmold appears to be grossly impacted with wax, remove the earmold piece from the hearing aid and wash it with a mild soap and water solution. Blow out the water before placing the mold back on the hearing aid. It is recommended that you do not use alcohol for cleaning as it may harden the mold over time and thus become uncomfortable to wear.

BOOKS FOR CHILDREN

(P = Primary, M = Middle, U = Upper grade level recommendations)

Baker, Margaret J. The Sand Bird. New York, N.Y.: Thomas Nelson, 1973. A deaf child and two friends buy a mysterious bird that changes their lives. (PM)

Bowe, F. and M. Sternberg. I'm Deaf Too: 12 Deaf Americans. National Association of the Deaf: Silver Springs, Maryland. 1973. Contains interviews with 12 prominent deaf persons. (MU)

Charlip, Remy. Handtalk: An A.B.C. of Finger Spelling and Sign Language. New York, N.Y.: Parent's Magazine Press, 1974. An introduction to two kinds of sign language.

Corbett, Scott. Deaf Before Docking. Boston, Mass.: G. K. Hall, 1972. A mystery story involving a deaf boy who reads lips. (PM)

Davidson, Margaret. Helen Keller. New York, N.Y.: Scholastic Book Services, 1969. The story of the famous woman who was deaf and blind.

Ets, N.H. Talking Without Words. New York, N.Y.: Viking Press, 1968. Illustrates a variety of ways to communicate.

Head, Barry, and Jim Seguin. Who Am I? Pittsburg, PA.: Family Communications, Inc., 1975. Photographs of a young deaf girl tell of her active life. (PM)

Hunter, Edith. Child of the Silent Night. New York, N.Y.: Dell, 1971. An inspiring story of a girl who is deaf and blind. (PMU)

Keller, Helen. Any books on Helen Keller or Anne Sullivan.

Levine, Edna. Lisa and Her Soundless World. New York, N.Y.: Human Sciences Press, 1974. A little girl with profoundly impaired hearing learns to use and understand speech. (PM)

Litchfield, Ada. A Button in Her Ear. Chicago, IL.: Albert Whitman Co., 1976. A little girl relates how her hearing deficiency is detected and corrected with the use of a hearing aid. (P)

Peterson, Jeanne Whitehouse. I Have a Sister, My Sister is Deaf. New York, N.Y.: Harper & Row, 1977. (PM) A warm, mutually supportive relationship between two sisters makes this a sensitive book depicting an exceptional child in the family.

Robinson, Veronica. David in Silence. Philadelphia, PA.: J. B. Lippincott, 1965. In the new town where his family has moved, David, who has been deaf since birth, finds himself disliked by the other children. (MU)

Spradley, Thomas & James R. Spradley. Deaf Like Me. New York, N.Y.: Random House, 1978. The story of Lynn Spradley's childhood as she and her family learn to cope with deafness. For older children and adults.

Wolf, Bernard. Anna's Silent World. Philadelphia, PA: J. B. Lippincott, 1977. Anna was born with a profound hearing loss, but leads an active life. (MU)

BOOKS FOR ADULTS

Hard of Hearing--These two books deal with the problems of hard of hearing children, in contrast to many books in this field which are largely concerned with severely or profoundly deaf children.

Berg, Frederick S. and Samuel G. Fletcher, Editors. The Hard of Hearing Child. New York, N.Y.: Grune & Stratton, 1970.

Davis, Julia, Editor. Our Forgotten Children: Hard-Of-Hearing Pupils in the Schools. 1977.

Deafness

Asley, Jack, M. P. Journey Into Silence. 1973. Account of experiences and coping techniques of a British member of parliament who became deaf.

Benderly, Beryl Lieff. Dancing Without Music, Deafness in America. Anchor/Doubleday, 1980. This book provides a discussion of deafness in America including a complete discussion of the issues in the oral vs. manualist controversy.

Birch, Jack W. Hearing Impaired Pupils in the Mainstream. 1975. Discussion of when to mainstream and how to mainstream hearing impaired children effectively.

Bitter, Grant B., Editor. Parents in Action: A Handbook of Experiences With Their Hearing Impaired Children. Washington, D.C.: Alexander Graham Bell Assoc., 1978. Thirteen parents of hearing impaired children write frankly of their experiences.

Elliot, M.H. Laura Bridgman. Boston, Mass: Little, Brown & Co. 1963. The biography of a deaf-blind girl.

Freeman, Roger D., Clifton F. Carbin, and Robert J. Boese. Can't Your Child Hear? A Guide for Those Who Care About Deaf Children. International Association of Parents of the Deaf. University Park Press: Baltimore, Maryland. 1980. This book is intended to provide a comprehensive guide for parents of deaf children from a total communication viewpoint. It is written by two physicians and a psychologist from the University of British Columbia.

Greenburg, Joanne. In This Sign. New York, N.Y.: Holt, Rinehart & Winston. 1970. A young deaf couple leave a sheltered life to live in a hearing world.

Helleberg, Marilyn. Your Hearing Loss, How to Break the Sound Barrier. Chicago: Nelson-Hall. 1979. Although intended primarily for older persons who suffer hearing loss, this book is also an excellent guide for parents of hearing impaired children. It provides very practical information on such topics as ear molds, background noise, high frequency loss, and much more.

Jacobs, Leo M. A Deaf Adult Speaks Out. 1974. Discussion of deafness by successful non-oral deaf adult. Includes discussion by deaf and hard of hearing persons on what deafness means to them and articles by deaf persons of obstacles deafness presents in every day living.

Mindel, Eugene D. & McCay, Vernon. They Grow in Silence, The Deaf Child and His Family. 1971. Strong statement supporting use of manual communication to deaf children.

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Moffat, Samuel. Helping the Child Who Cannot Hear. Public Affairs Pamphlet No. 479, June 1972, 381 Park Ave. S., New York, N.Y. 10016. Excellent simple discussion of problems and educational choices for parents of hearing handicapped children.

Moores, Donald. Educating Deaf Children-Psychology, Principles and Practices. Houghton-Mifflin: Boston, 1978.

Myklebust, Helmer R. Your Deaf Child: A Guide for Parents. Charles C. Thomas: Springfield, ILL.

Naiman, Doris W. & Jerome D. Schein. For Parents of Deaf Children. Silver Springs, MD: International Association of Parents of the Deaf, 1978. Guide for parents of deaf children.

Neyhus, Arthur I. and Gary F. Austin, Editors. Deafness and Adolescence. Wash., D.C.: Alexander Graham Bell Association, 1978. Discussion of various problems encountered by deaf adolescents and how to deal with them.

Nix, Gary W., Editor. Mainstream Education for Hearing Impaired Children and Youth. 1976. Excellent collection on different aspects of mainstreaming.

Nix, Gary W., Editor. The Rights of Hearing-Impaired Children, Wash. D.C.: Alexander Graham Bell Association for the Deaf. 1977. Discussion of educational rights of hearing impaired children under P.L. 94-142.

Northcott, Winifred H., Editor. The Hearing Impaired Child in a Regular Classroom, Preschool, Elementary and Secondary Years, A Guide for the Classroom Teacher/Administrator. 1973. Many practical suggestions for teachers, a wealth of information on mainstreaming.

Pollack, Doreen. Educational Audiology for the Limited Hearing Infant. 1970. Very complete explanation and argument for "acoupedic" method to maximize residual hearing in infants and small children. Includes diaries of mothers of hearing impaired children recording their frustrations and successes.

Schlesinger, Hilde S. & Kathryn P. Meadow. Sound and Sign, Childhood Deafness and Mental Health. 1972. Excellent study of implications of deafness on children's social and emotional development by psychiatrist who has worked extensively with deaf children and teacher of the deaf.

Spradley, Thomas S. and James P. Spradley. Deaf Like Me. N.Y.: Random House. 1978. Account of family with profoundly deaf daughter who made great progress with total communication.

West, Paul. Words for a Deaf Daughter. Harper & Row: N.Y. 1970 . This poet and novelist writes a letter to his multi-handicapped daughter.

Wright, David. The Deaf Child in the Public Schools: A Handbook for Parents. Silver Springs, MD: National Association for the Deaf. 1978.

Wright, David. Deafness. New York: Stein & Day. 1969. Moving autobiography of deaf adult and historical discussion of education of the deaf.

FILMS

Lifeline to the World of Sound. (13 minutes, color, sound, #2639 free) Available from Modern Talking Pictures, 1212 Ave. of the Americas, New York, N.Y. 10036. The film describes the problems of deafness and how a hearing aid helps.

Listen. (No details) Available from Total Communication Library, Western Maryland College, Westminster, Maryland, 1972. The film helps non-disabled persons better understand those who are hearing impaired.

The Silent World of Jim. Available from Informational Materials, Inc., Burbank, Calif. It is a story of a deaf boy learning about safety.

Can You Hear Me? (30 minutes, color, sound, free) Available from 3M Company, Film Lending Service, 220-6W 2501 Hudson Rd., St. Paul, MN 55119. Produced in 1967. The film tells the story of the family of a 2½ year old deaf girl and how they deal with the problems of her disability.

Mary (from People You'd Like to Know Series) (10 minutes, color, sound, 1978.) About an 11 year old girl who was born deaf and talks about her feelings.*

Helping My Parents (from Special Children-ZOOM Series) (6 minutes, color, 1978.) Young Alberta talks about growing up with deaf parents.*

*Above films available from Audio Visual Library Services, 3300 University Ave. S.E., University of Minnesota, Minneapolis, MN 55414.

ORGANIZATIONS

National organizations:

Alexander Graham Bell Association
3417 Volta Place N.W.
Washington, D.C. 20007 (Has pamphlets and other resources available)

Gallaudet College (Liberal Arts College for the Deaf)
Materials Specialist
7th & Florida Ave. N.E.
Washington, D.C. 20002 (Has pamphlets, booklists, materials available)

International Association of Parents of the Deaf
814 Thayer Ave.
Silver Springs, Maryland 20910 (Has catalogue of available materials)

National Association of the Deaf
814 Thayer Ave.
Silver Springs, MD 20910 (Has pamphlets and alphabet cards available)

National Registry of Interpreters for the Deaf
Gallaudet College
Kendall Green
Washington, D.C. 20002

National Hearing Aid Society
20361 Middlebelt
Livonia, MI 48152
Toll free phone: (800) 521-5247 (Provides information about hearing aids and hearing loss)

State organizations and agencies are listed in Additional Resource Section at end of packet.

SPEECH IMPAIRMENTS

WHAT IS A SPEECH DISORDER?

The disability category that Public Law 94-142 calls "speech impaired" is quite broad. A speech disorder may be part of another disability involving a known biological cause (eg. hearing loss or cerebral palsy); speech impairment may be the only disability; or sometimes it might be one aspect of a specific learning disability. Most speech and language disorders have no biological cause and are termed functional disorders.

P.L. 94-142 defines speech impaired as "a communication disorder such as stuttering, impaired articulation, a language impairment, or a voice impairment which adversely affects a child's educational performance."

Children who have speech problems represent the second largest group of children receiving special education services in elementary schools in America. In Minnesota 19,163 children received speech service in 1982-83.

Many young children have some speech differences from their peers. Often these differences do not adversely affect the child's educational performance. When they do seem to be interfering with learning progress, that child's development should be assessed by a professional.

Communication disorders can be characterized by problems in any one or a combination of the following:

> Articulation disorders are problems related to the sounds in a language. Errors might be omissions, substitutions, or distortions of sounds.
>
> Voice disorders are usually identified as significant deviations in pitch, loudness or tonal quality. Nasality and denasality are usually the result of muscular or structural problems and often require medical services in addition to speech therapy.
>
> Language disorders include a wide range of problems relating to a child's understanding of what others say (receptive disorders) or to his or her ability to express ideas in words (expressive disorders). Children who have difficulty understanding language usually have difficulty expressing themselves. The reverse is often not true.
>
> Stuttering is a disorder which may cause a child to repeat initial sounds or whole words, to prolong certain sounds, or to have a complete block out with no speech at all.

The people who see a child regularly can play an important role in deciding whether he or she does have a communication problem that may need special attention. It may be helpful to consider the following in that decision: Does the child talk like other children of his or her age? Is the child's ability to communicate or to understand what is said so limited that it keeps him or her from participating fully with other children?

FEELINGS ABOUT HAVING A SPEECH IMPAIRMENT

One of the children in Feeling Free (Addison-Wesley Press: Reading, MA, 1979) puts into words what many children with communication disorders may feel.

> "When it's real hard for me to say things, I have to keep practicing them over and over in my head. I have to think before I talk. I really have to concentrate because for me the words don't come out naturally, like they do for hearing people. But talking is important to me. I want people to understand me, so I never give up.
>
> "I guess the toughest thing is to start talking in front of people who have never heard me speak before, like when I go into a store for the first time. Sometimes I get a little nervous. I start rehearsing what I'm going to say before I walk in the door. When I finally do go in and start talking, people understand me after all." (1)

Another child said:

> "The most wonderful thing about being able to pronounce my sounds now is that people aren't always saying 'What? What's that?' I bet I've heard that fifty thousand times. Often they'd shout at me as though I were deaf and that usually made me talk worse. Or they'd answer 'YES,' when that just didn't make sense." (2)

PUPPETS THAT DEPICT SPEECH IMPAIRMENTS

Several puppets have speech disorders. One, because of his hearing impairment, has never heard speech. Thus articulation is poor and the voice has a monotone quality. Another with impaired muscular coordination because of cerebral palsy, struggles to speak and has exaggerated head and mouth motions, but can be understood quite well.

(1) Reprinted from FEELING FREE, © 1979, American Institutes for Research by permission of Addison-Wesley Publishing Company, Inc., Reading, Massachusetts 01867. All Rights Reserved.

(2) Payne, Kauffman, Patton, Brown, DeMott. Exceptional Children in Focus. Columbus, Ohio: Merrill Publishing Co., 1979.

RESOURCES

BOOKS FOR CHILDREN

(P = Primary, M = Middle, U = Upper grade level recommendations)

Christopher, Matthew. Glue Fingers. Boston, Mass.: Little, Brown & Co., 1975. Bill Joe is reluctant to play football because he stutters. (MU)

Corcoran, Barbara. A Dance to Still Music. New York, N.Y.: Atheneum, 1974. A fourteen-year-old girl newly deaf doesn't want to speak because she can't control her own voice. (MU)

Kelley, Sally. Trouble With Explosives. New York, N.Y.: Bradbury Press, 1976. Story about a child who stutters. (MU)

Lee, Mildred. The Skating Rink. New York, N.Y.: The Seabury Press, 1969. Fifteen-year-old Tuck Farady overcomes his self consciousness about his stuttering on the skating rink. (MU)

Levine, Edna. Lisa and Her Soundless World. New York, N.Y.: Human Services Press, 1974. The efforts of a deaf girl to talk. (PMU)

White, E. B. The Trumpet of the Swan. New York, N.Y.: Harper & Row, 1970. A fantasy of a trumpeter swan who is born without a voice but learns to play a trumpet.

BOOKS FOR ADULTS

Ainsworth, Stanley. Stuttering: What It Is and What To Do About It. Lincoln, Nebraska: Cliff Notes, 1975.

Allen, K. E., Holm, V. A. & Schiefelbusch, R. L. (Editors). Early Intervention--The Team Approach. Baltimore, Maryland: University Park Press, 1978.

Anderson, Virgil & Newby, Hayes. Improving the Child's Speech. Oxford University Press: 1973. Practical suggestions.

Blake, James Neal. Speech Education Activities for Children. Springfield, ILL.: Charles C. Thomas, 1970. Speech stimulation activities for teachers.

Cooper, J. O. & Edge, D. Parenting Strategies and Educational Methods. Columbus, Ohio: Charles E. Merrill, 1978.

Fallen, N. H. with McGovern, J. E. Young Children with Special Needs. Columbus, Ohio, Charles E. Merrill, 1978.

Hayden, Alice (Editor). Education of the Very Young. Educational Horizons, 1972.

Hayden, Alice & McGinnes, G. "Bases for Early Intervention." In Sontage, E., Smith, J. Certo, (Editors) Educational Programming for the Severely and Profoundly Handicapped. Reston, VA: Council for Exceptional Children, 1977.

Mowrer, D. E. Methods of Modifying Speech Behaviors. Columbus, Ohio: Charles E. Merrill, 1977.

Partners in Language: A Guide for Parents. American Speech and Hearing Association, 9030 Old Georgetown Road, Washington, D.C. 20014. 1973.

Schreiber, Flora R. Your Child's Speech. Ballantine, 1973. It includes sources for help. Practical ideas on how speech and language development can be encouraged.

Van Riper, C. Speech Correction: Principles and Methods. 6th Edition. Englewood Cliffs, N.J.: Prentice-Hall, 1978.

Van Riper, C. Teaching Your Child To Talk. New York, N.Y.: Harper & Row, 1952. Highly readable and helpful piece on speech and language development in young children and how to develop it.

Wicka, Donna K. & Falk, M. Advice to Parents of a Cleft Palate Child. Springfield, ILL: Charles Thomas Publishers, 1970. The work of professionals is summarized.

Wiig, E. H. & Semel, E. M. Language Disabilities in Children and Adolescents. Columbus, Ohio: Charles E. Merrill, 1976.

ORGANIZATIONS

National organizations include:

American Speech and Hearing Association
9030 Old Georgetown Rd.
Washington, D.C. 20014

American Speech and Hearing Foundation
10801 Rockville Pike
Rockville, Maryland 20852

Speech Foundation of America
152 Lombardy Road
Memphis, Tennessee 38111

State organizations and agencies are listed in Additional Resource Section at end of packet.

PHYSICAL HANDICAPS

WHAT ARE PHYSICAL IMPAIRMENTS?

Public Law 94-142 defines orthopedically handicapped as "a severe orthopedic impairment which adversely affects a child's educational performance." The term includes impairments caused by congenital anomaly (birth defect: e.g. clubfoot, absence of some limb, spina bifida); impairments caused by disease (e.g. polio, multiple sclerosis, etc.); and impairments from other causes (e.g. cerebral palsy, amputations, spinal cord injury.)

Many orthopedically impaired children have average or above average intelligence and can function in a mainstream classroom situation. Most of them may need to be provided with adaptive aids for learning or the help of a teacher's aide.

In 1982-83, the total number of children in Minnesota receiving special education because of physical impairments was 3,149.

Listed below are the physical disabilities most commonly affecting children.

CEREBRAL PALSY

WHAT IS CEREBRAL PALSY?

Cerebral palsy is a permanent disability caused by damage to the brain. "Cerebral" refers to the brain and "palsy" refers to lack of control over the muscles. The term cerebral palsy includes a large number of neuromuscular disorders of differing severity levels and varying symptoms.

For the disorder to be classified as cerebral palsy, not only must there be a problem with muscle movement or posture, but also the problem must occur early in development at the time of the brain's most rapid growth. In some cases the muscular disorder may be accompanied by mental or emotional impairment, convulsive seizures (called epilepsy), or losses in hearing, vision, or the other senses. Some of these associated conditions can be treated successfully and some kinds of cerebral palsy can improve with intervention. However, the nerve cells involved are limited in their powers of repair and regeneration.

Injury to the brain that results in cerebral palsy usually occurs before, during, or shortly following birth. The chief cause is an insufficient amount of oxygen reaching the brain in the fetus or newborn child. Other factors may include maternal viral illness, blood incompatibility, or viruses or bacteria which attack the infant's central nervous system. The disorder occurs in about four out of every 1,000 persons. At the present time, there are an estimated 750,000 Americans with cerebral palsy, and approximately 9,000 new cases occur every year.

The condition cannot be inherited. There are 3 main types of cerebral palsy. The most common type is called SPASTIC cerebral palsy. The muscles are tense in contracting. When reflexes are tested, responses may be very brisk, resulting in repeated contractions. If a child with spasticity is supported under the arms, the legs often lay straight down, unable to flex at the knees. The lower legs turn in and cross at the ankle. The movements of the legs are stiff and resemble the cross blade of a pair of scissors, hence the term "scissors gait". This condition can sometimes be corrected by surgery.

The second type, ATHETOID, is characterized by involuntary movements of affected parts of the body. This incessant slow activity is called ATHETOSIS. The hands may turn in and twist, and there may be facial grimaces, poor tongue control and drooling. Another form of involuntary movements occuring with athetosis involve abrupt flailing or jerky motions of the body.

The third type of cerebral palsy is called ATAXIA. The principal movement disturbance is lack of balance and coordination. Persons with ataxia may sway when standing, have trouble maintaining balance, and often walk with feet spread wide apart to avoid falling.

Depending on the degree of motor impairment, most persons with cerebral palsy can be very self sufficient with appropriate adaptive aids and appliances.

FEELINGS ABOUT HAVING CEREBRAL PALSY

The feelings of having cerebral palsy as written by LeAnne Nelson-Dahl, who has cerebral palsy, are reflected in the following narratives:

> "All children and grownups experience many kinds of feelings during their lifetimes. All of us should learn that having feelings and being able to talk about them to our parents, teachers or friends is good. Whether one feels good, bad, angry, or sad, he or she should not be afraid to tell others. By saying how we feel, we show that we have the courage or are strong enough to talk about it. It is also important to be able to talk about our disabilities, and to be honest."

For example, in the following story, a brother helps his sister make a new friend:

SARAH

One day Jenny was jumping rope in front of her house. Suddenly she saw a boy about 12 years old pushing a girl in a wheel chair. They stopped when they got to Jenny.

"Hi," said Jenny. "Where are you going?"

"Hi," said the boy. "I'm taking my sister Sarah out for a walk. My name is Tom.. What'syours?"

"Jenny." The girl was quiet for a while as she stared at the girl in the wheelchair. Then she asked, "What's wrong with you, Sarah? Were you in a car accident?"

"No, I was born with cerebral palsy," answered Sarah.

"But you have legs. Why don't you walk?" said Jenny as she pointed to Sarah's legs.

"Well, the muscles don't work right because my brain was injured and it doesn't send messages correctly to my legs. That is, they look okay but they don't work right. The doctors says that with therapy maybe some day I'll walk in some way, but maybe not."

"Oh, that's too bad," Jenny said. "Doesn't that make you sad or mad?"

"Well yeh, sometimes I get mad that I can't get up and run across the park...then I feel sad, too. But most of the time I'm a happy person. There are lots of things I can do and that's what I work on the hardest."

Jenny replied, "I wish you could run and jump rope like me. Do people ever make fun of you because you use a wheelchair?"

"Sometimes younger kids do, but I just explain why use this chair and most of the time they understand."

"I guess I will try to remember to never laugh at you or anyone that does things different than me," said Jenny.

"That's great!", said Tom. "Say, why don't we have a picnic tomorrow at our house?"

"Oh, I'd like that! Could we, Tom, could we?" asked Sarah. "Would you come, Jenny?"

"Yes, oh yes!" Jenny smiled with joy as she reached out for her new friend's hand.

PUPPET USED TO PORTRAY CEREBRAL PALSY

The puppet used for COUNT ME IN presentations to depict cerebral palsy is affected in such a way that the puppet cannot walk, so uses a wheel chair. Speech is also difficult so children may have to listen very carefully to understand what is said.

The puppet's hands do not work too well. It is easier for her to write with a large pencil or crayon, to brush her teeth with an electric toothbrush, and play card games with a special holder for the cards. Sometimes the puppet does homework on the cassette tape so the teacher can listen to it. The puppet talks about learning to swim and to even play soccer, using the wheelchair to kick the ball.

SPINA BIFIDA

WHAT IS SPINA BIFIDA?

Spina Bifida (spy-nuh bi'-fi-duh) is a congenital defect which is present at birth. Literally, it means "open spine" or "spine split in two." One or more of the spinal vertebrae fails to close completely and leaves an opening in the spine.

The most common and serious form of spina bifida causing lasting effects for the child is myelomeningocele. The spinal cord protrudes through the opening in the spine often forming a sac (the opening is surgically closed shortly after birth). Since this opening usually occurs at the lower end of the spinal cord, control of the legs, feet, bladder and bowels can be affected in varying degrees. These can range from mild weakness to complete paralysis.

The resulting disability varies with each individual. Some children with spina bifida have little or no disability. Yet, others have varying degrees of paralysis of the legs, and incontinence (lack of bladder and bowel control), which can sometimes be helped through surgical procedures or artificial devices (e.g. urinary bags).

Parents and teachers need to check for presence of skin or pressure sores, since the child has no sensations in the lower extremities and will spend long hours in braces or wheelchair. Also important in the child's life is a good understanding of psycho-social concerns presented by the disability.

Education requires adaptations for physical needs, but as much as the child has good use of the upper part of body, other modifications are minimal.

FEELINGS ABOUT A CHILD WITH SPINA BIFIDA

For six years, since my daughter's birth, I have been experimenting with various methods of explaining Jill's differences to nieces and nephews, neighbor children, and most recently classmates. Perhaps some of my experiences can be helpful.

Whenever possible I think the child with spina bifida should answer questions and give explanations about herself with assistance from adults when needed. Very often questions about Jill are asked of me even when she is present. By directing the question back to Jill, the focus becomes Jill, as a person, rather than an object to be talked about. Answering questions about herself is not difficult for Jill now, although she is extremely brief and to the point--"I use a wheelchair because I can't walk. My legs don't work. It was that way when I was born."

Before Jill was able to explain and now when further explanation is necessary, I've found that short, non-medical explanations are best. Of course, terminology should be varied depending on the student's age.

For young elementary aged children, my explanation has been: "Jill was born with a hole in her back. The doctors fixed it but her legs still don't work so she uses a wheelchair to get around."

For older elementary children who especially seem to want (or need) more details, I elaborate: "Jill was born with a hole in her spine. The doctors repaired it but nerves that should have gone to the muscles in her legs didn't make it past the hole. Without nerves, the muscles don't work so Jill's legs can't hold her up for standing or for walking. She is paralyzed from her waist down and uses her wheelchair to get around."

It has been my experience that these brief explanations are very satisfactory for most children. Lengthy medical conversations are sometimes frightening, often boring, and almost always more than anyone wants to know.

One thing children of all ages seem to be interested in is Jill's wheelchair. When starting kindergarten last year, Jill's teacher had her "show and tell" about her chair: the wheels, the brakes. She stressed that it isn't a toy and that Jill works it very well herself and should be asked if she'd like a push. Some children seem to benefit from actually using Jill's chair, and since she isn't bothered by this, we allow it when it seems appropriate.

An attitude that I believe causes some difficulty for children is differentness--that because a child with spina bifida is physically different, then everything about them is different. As the mother of a physically different six year old, I would like to see equal emphasis placed on the sameness of all children. Maybe my daughter said it best when I asked her recently what would be some important things I should say when describing her:

> "I have curly hair that's too short for barrettes.
> My favorite color is green.
> I'm six years old.
> I have a baby sister.
> I go to school every day.
> I hate worksheets when they're hard.
> I take swimming lessons at the Y.
> My favorite thing to do is play with friends.
> I love chocolate pudding."

The information about spina bifida was written by Christy Bateman, member of PACER Board of Directors and parent of Jill.

SPINAL CORD INJURY

SPINAL CORD INJURY can occur through an accident (such as diving, parachuting errors, broken back, or severe whiplash) or illness, and can result in varying degrees of paralysis and loss of sensation.

Total paralysis which affects all four limbs as well as some body functions is referred to as QUADRAPLEGIA. Partial or total paralysis for either the upper limbs or the lower limbs is referred to as PARAPLEGIA.

It is not unusual for individuals with paralysis to lack skin sensations and feelings of pain. This may present problems. For example, the child with paralysis in the lower extremities would not feel scalding bath water and could be unintentionally badly burned. Shoes and socks must be fitted and checked carefully to prevent skin damage to the feet. Also, bowel and bladder problems often occur in cases of quadraplegia and paraplegia.

Spinal cord injuries usually do not affect the ability of a child to learn. Intelligence varies from individual to individual just as in the general population. However, adjustments can and should be made in the classroom so that it is easier for the physically handicapped student to manage to do the work and participate in activities with his or her peers.

MULTIPLE SCLEROSIS

Multiple sclerosis (MS) is a neurological disease. It attacks the white fatty tissue (myelin sheath) which is the coating around the message-carrying nerve fibers in the brain and spinal cord. Where myelin has been destroyed, it is replaced by plaques of hardened tissue (sclerosis). This occurs in multiple places within the nervous system. At first, nerve impulses are transmitted with minor interruptions; later plaques may completely obstruct impulses along central nerves.

Although approximately two thirds of those who have MS experience their first symptoms between the ages of 20 and 40 or even in their 50's, the disease may begin in childhood. It seems to occur at a higher incidence rate in cold climates.

Multiple sclerosis is not contagious and it cannot be inherited.

There are no drugs that can cure MS, but there are medications doctors can prescribe to offer relief.

MUSCULAR DYSTROPHY

The muscular dystrophies are progressive conditions in which muscles deteriorate for various reasons. The most familiar dystrophy is Duchenne Muscular Dystrophy in which muscles are replaced by fatty tissue. This can begin to occur as early as between the ages of one and six. Early signs of the condition include a tendency to fall easily, clumsiness in walking,and difficulty in climbing stairs.

Once the disease begins, there is a steady decline in a child's ability to walk. Eventually crutches will be needed and later a wheelchair. Finally all large muscles will be involved and the individual will be bedridden. Fortunately, the small muscles of the hands and fingers maintain some strength even during the most advanced stages.

Education can be a most meaningful part of the child's life. During the early stages of muscular dystrophy, the child should be encouraged to continue in the regular classroom and its programs. Adaptations for school and eventually homebound instruction need to be considered as the disability progresses. Ongoing counseling services are essential to the family and child as they cope with the terminal aspect of muscular dystrophy.

BRITTLE BONE DISEASE

Osteogenesis imperfecta (OI), commonly known as brittle bone disease, is a very rare inherited condition that begins in fetal life and often is evident at birth or during early childhood, but occasionally is not diagnosed until later. It occurs once in every 20,000 live births.

The three main signs of this disease are fragile bones that break very easily, blue sclera in the eyes, and conductive deafness caused by gradual formation of spongy bone tissue in the middle ear.

Children with osteogenesis imperfecta are usually smaller than average, have underdeveloped muscles, and must be careful in avoiding any activity that may result in broken bones. Laughing and coughing, even a loving hug, could lead to serious injury in a child with such a condition. Children with brittle bones may have to spend repeated periods in the hospital, or have their limbs in casts.

AMPUTEE

The most frequent causes of the loss of an arm, leg, hand or foot are from accidents, infections such as gangrene, or diseases such as cancer. However, children are sometimes born without limbs (a frequent birth defect in the 1960's among children whose mothers took the drug thalidomide during the early stages of pregnancy.) In most situations, children and adults are fitted with a "prosthesis," an artificial arm, hand, leg or foot.

With or without an artificial limb, most amputees do learn to dress, bathe, cook, drive a car, and participate in most activities and occupations. In school, the child can learn to write, draw, and play games with his/her classmates. Some children are comfortable demonstrating their prosthesic devices and showing how they work.

EDUCATIONAL PROGRAMS FOR PHYSICALLY HANDICAPPED CHILDREN

Many children with physical disabilities are educated in regular classrooms with their nonhandicapped peers. Those children whose orthopedic problems are extremely involved or who may have multiple handicaps are usually provided with a program in a special classroom or building that is specifically equipped throughout for their varied needs.

However, in either setting children with motor impairments receive adaptive physical education as a part of their regular school program, as well as related services from various kinds of therapists:

an occupational therapist assists the student in the development of fine motor skills (such as cutting, pasting, writing, and eye-hand coordination and self-help skills (such as eating and dressing.)

a physical therapist emphasizes the development of the large muscles, the gross motor skills such as walking, sitting, climbing, and includes the help needed with wheelchairs, braces, crutches, etc.

a music therapist or recreation therapist uses music or recreation activities to aid in the overall development of the child. Music and games can help muscles relax, speech and communication to flow more easily, and bodily motion to occur more spontaneously.

a speech and language therapist, clinician, or pathologist treats speech and language delays and disorders and works with each child to develop the best possible understandable communication skills.

According to Section 504 of the Rehabilitation Act of 1973, a school district must provide accessible programs for physically handicapped students.

When a physically handicapped child is in the classroom, the teacher should have an established procedure to follow in helping that child out of the building in a fire drill or other emergency. For example, if the child uses a wheelchair, two teachers or other adults should be prepared to carry the child out of the building, as elevators cannot be used. Physically disabled children who are able to walk should be accompanied out of the building by an adult.

INDEPENDENCE FOR THOSE WITH PHYSICAL DISABILITIES

The major problem confronting most motor impaired persons is one of independence because of difficulties and restrictions in mobility. All children and adults want and should be allowed--even encouraged--to be as independent as possible. Often, however, orthopedically handicapped persons may be overprotected and assumed less capable because of their motor impairments.

Independence needs to be interpreted differently for each disabled individual, whether child or adult. A child with mild cerebral palsy may be able to do anything without special aids by just allowing extra time for each project. A child with paraplegia may need specific appliances for certain projects: a standing frame to get close to the family car to help scrub it clean, but the wheelchair for sitting again to hose off the suds. A motorized wheelchair may enable an older quadriplegic child to navigate independently around the house, yard, and neighborhood.

For adults, the most independent life style many enjoy is living in their own home or apartment, where there may be adaptations to allow full accessibility and ease, regardless of degree of mobility difficulty. Kitchens and bathrooms with wide doors, home with ramps, door levers instead of handles, and appliances adapted for lower working levels make independence possible.

Managing one's own life style, coming and going as one is able means total independence. Various types of public transportation for handicapped persons and adapted vehicles add to that freedom.

Sometimes it is necessary to have another person share the responsibility for daily needs. In many cases, persons requiring personal care hire an attendant to assist in taking care of their needs. The attendant's duties can range from assisting the disabled person in and out of bed, to dressing, preparing meals, and shopping.

Semi-independent living options may include living in a group home where there are several handicapped people who need help with personal care and household duties, or staying in one's family home where parents and siblings assist in the care. No matter which life style is chosen, the real test of true independence is how the individual feels about himself/herself.

Three examples from persons at the Center for Independent Living in Berkely, California, clarify the meaning of independence:

> "Julie, who uses a wheelchair as a result of polio, majored in journalism in college and now works as a newspaper editor. She loves her work and is good at it. Julie admits that she faced many difficulties in reaching her career goal and is still overcoming obstacles. She has a very definite idea of what it means to be independent: 'I want to set my own goals and make the decisions that will affect my life. To me, that's what independence is all about.'
>
> "Dan, a quadriplegic who works as a clinical psychologist, has some opinions on these issues: 'I need the assistance of an attendant and I can't drive, yet I still feel that I am living an independent life. To me, independence doesn't mean being able to do everything, or not needing other people. I've been able to organize my life in a way that is very satisfying to me. I have a successful career, travel and enjoy cultural events in my city. I love being with people and have a lot of friends. Sure, I have some limitations, but who doesn't?'
>
> "Eric, a high school student who has speech and hearing disabilities, has a slightly different view of what it means to be independent: 'Independence means being fully me. I have a lot of feelings, abilities and dreams. Independence means freeing what's inside of me and letting it come out. I love to work on cars and I'm really good at it. When I graduate I want to work as a car mechanic. I also enjoy writing poetry for fun. Because of my speech problems, I can express myself a lot better in writing. Who knows, some day, I might even write a book! I feel I have a lot to contribute to the world I live in." *

AIDS AND APPLIANCES

For mobility canes, crutches, braces, and wheelchairs are frequently used.

> There are several types of canes. Those with three (tripod) or four point bases offer considerably more support than the ordinary cane.
>
> Crutches are familiar to most children, but the type with cuffs or hands that encircle the arm above or below the elbow add to security of movement.
>
> Walkers, with or without wheels, are often used to aid mobility and stability in movement.

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*Taking Charge of Your Life: A Guide to Independence for Teens With Physical Disabilities. Washington, D.C.: Closer Look, 1981. Page 20. By permission.

Braces, mechanical devices made of metal, not only help facilitate mobility but can also help prevent deformity, hold the body in place, and provide support. Size of braces includes smallones to aid the ankle and long leg braces that extend from foot to thigh and may have locks and hinges to allow rigidity for standing and flexibility for walking.

Some orthopedically handicapped children wear *helmets* to protect their heads during mobility exercises and other activities.

Wheelchairs are familiar to most children. They are equipped with seat belts and brakes, and sometimes other devices like moveable footrests, cup holders, etc. Electric wheelchairs can be operated by pushing a lever with one finger or a hand. Adaptations can be made for use even by a persons quadriplegically disabled.

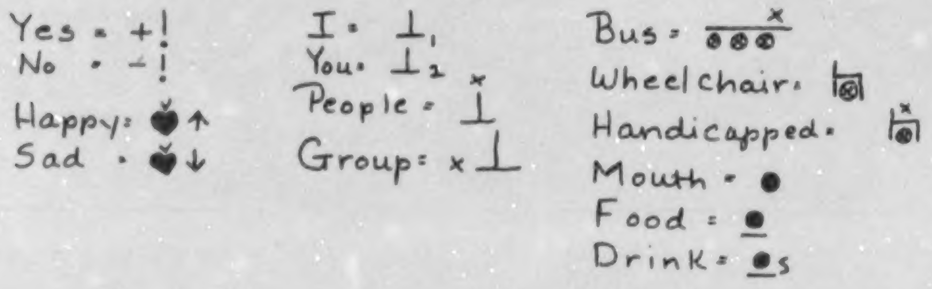
Young children often like to get around on *scooter boards*, hand propelled *carts*, and similar devices.

For classroom and home activities, aids and appliances commonly used include standing frames, adaptive chairs, bolsters and wedges, lowered tables, counters, desks, lap boards, card holders, book and pencil holders, etc.

For self care, many appliances enable physically disabled persons to tend to their own needs. Spoons, knives, forks, plates and cups modified in various ways (large, circular tube-like handles; particular angles; adaptive edges) make eating easier. Electric appliances such as scissors and toothbrush; additional railings in shower, bathtubs, and hallways; elevated toilets; and lowered sinks and kitchen appliances, make independence possible. Items such as reachers, velcro fasteners, extra large button holes, and adaptive clothing are important.

For communication, devices such as electric typewriters, adaptive telephones, tape recorders, and electronic speech devices expand opportunities. Computer assisted communication is promising and developing rapidly. For persons without the ability to speak, many types of communication boards have been created. Bliss boards and other communication boards have printed words or symbols to which the nonverbalperson can print or look to indicate what he wants to communicate.

One method of nonverbal communication is called Bliss Symbols. A few examples of words are:



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QUESTIONS OUR PUPPET HAS BEEN ASKED

DO YOU HAVE TO SLEEP IN YOUR WHEELCHAIR?

No, I sleep in a bed just like you do. I roll my wheelchair up close to the bed and then, with some help from Mom or Dad, I lift myself out of the wheelchair and on to the bed. That's called "transfer."

HOW DO YOU TAKE A BATH?

Well, Mom helps me into the tub and I scrub myself as well as I can. Just before I am ready to have her help me out, she checks behind my ears to make sure I'm clean. I love to be in the water cuz it helps my muscles relax--you know--like at the swimming pool.

CAN YOU GO FOR A RIDE IN A CAR?

Sure. Mom, Dad, or a friend helps me into the car seat. Then they collapse my wheelchair and put it in the trunk. Neat, huh! Some day we may get a van and I'll just roll right in.

HOW DO YOU HOLD YOUR HEAD STILL FOR A DENTIST?

Before I go to the dentist, I take a muscle relaxant the doctor ordered for me. Then my head is very relaxed. I'd feel real bad if I accidentally bit the dentist's fingers.

IF THERE WERE A FIRE IN YOUR HOUSE, HOW WOULD YOU GET OUT?

The fire department has special signs (decals) that can be put in windows to indicate there is a handicapped person living in the house. My decal is in my bedroom window, so firemen would know where I'm sleeping.

CAN YOU PLAY ANY SPORTS?

Sure, there are lots of sports I can play. I love basketball--there are wheelchair basketball teams (like the Minnesota Rolling Gophers). And there are square dance groups for people in wheelchairs that I'd like to try out for when I get older. And my dad just found a way to attach a hockey stick to my friend's wheelchair so he can play floor hockey. I might try that, too.

HOW DO YOU GO UP OR DOWN STAIRS?

> Well, I always look for ramps or elevators first. If the building doesn't have those, I either stay on ground floor or someone has to carry me and my wheelchair up or down. Our house is all on one floor and Dad built ramps for the steps at the front door and back door.

IF YOU CAN'T GET YOUR WHEELCHAIR UP TO THE DRINKING FOUNTAIN, HOW DO YOU GET A DRINK?

> I use a glass. I have a "back pack" on my wheelchair. In there I keep a glass, tongs or "reachers" to grab things that are out of my reach: sharpened pencils, extra paper, an extra sweater, and my favorite book--you know, in case I have a long wait for my school bus.

DO YOU HAVE FRIENDS?

> Oh, yeh, I have lots of friends. Some are handicapped and some aren't. Do you have friends who are handicapped and who aren't?

SIMULATION ACTIVITIES FOR PHYSICAL DISABILITIES

1. "MUSCLE CONTROL" (Elementary)

   EQUIPMENT: Masking tape.

   a. Have children lie down on the floor, then try to get up without using their heads. Discuss the degree of effort required.

   b. Have children sit in a small group while the teacher reads a story or leads a discussion. Have students continually keep dropping their heads loosely, and at the end of the story discuss how well they could follow the story line.

   c. Put a long strip of masking tape on the floor. One at a time, have children close their eyes, spin around several times, open their eyes, and try to walk down the tape line.

2. "EXTRA WEIGHT" (Elementary)

   EQUIPMENT: Sandbags with arm bands to go around wrists.

   Put sandbags on wrists and have children walk around the room three times with arms outstretched, or write at a table with sandbags held over the edge. Discuss how difficult it would be to wear heavy braces all the time on arms or legs.

3. "ALL THUMBS" (Elementary)

EQUIPMENT: Masking tape, raisins or chocolate chips, pudding, spoon, heavy socks.

Tape down the fingers of the weaker hand, leaving only the thumb free. Using only that hand, eat raisins or feed a friend pudding. Discuss their reactions to poor motor control.

Put a couple pairs of heavy socks on children's hands and have them try the same exercise. Discuss reactions.

4. "MODES OF MOTION" (Preschool--elementary)

EQUIPMENT: Chalk and chalkboard

Discuss with the children the many ways people move (walking, crawling, hopping, skating, flying, tiptoeing) and why people move in these ways. Then discuss reasons people have for adapting their modes of motion (such as crawling because they're looking for lost contact lenses, tiptoeing because someone is sleeping, running to escape a fire, etc.).

Have each child choose a "mode of motion" (appropriate for the setting, of course) and use it exclusively for all day or part of a day. Discuss with children their feelings about being able to get around using only one "mode of motion."

5. "NURSERY RHYMES" (Preschool--Primary)

EQUIPMENT: Pictures or books depicting nursery rhymes.

Discuss various nursery rhymes that the children know and talk about changes that would need to be made if principal characters had certain handicaps.

Example: JACK AND JILL

What if Jack's legs didn't work and he used a wheelchair--how would he get a bucket of water from the well at the top of a hill? (Jill could push him up the hill, attach the bucket to the rope, and Jack could lower the bucket into the well by slowly releasing the rope or turning the crank. Also, since Jack was in a wheel chair and Jill would help him down the hill, he wouldn't be likely to fall!)

HUMPTY DUMPTY

What if, when he fell off the wall, he broke one of his legs? What could the King's horses and men do for him? Might he be on crutches a while?

6. TRY IT OUT (all ages)

EQUIPMENT: Any aids and appliances that can be secured from rental places or catalogues.

Bring to the classroom devices used by physically handicapped children and adults. These can often be rented or borrowed from hospital equipment supply stores or rehabilitation centers. Let the children experiment and ask questions. They might also be interested in looking at catalogues of devices and clothing available for handicapped children.

RESOURCES

BOOKS FOR CHILDREN

(P = Primary, M = Middle, U = Upper grade level recommendations)

Chinn, Richard H. Each Step of the Way. Johnston, PA: Matex Assoc. Inc. 1975. This autobiography emphasized the teen years and early adult years with athetoid cerebral palsy.

Christopher, Matthew. Sink It Rusty. Boston, MA: Little, Brown & Co. 1963. A story about a boy with paralysis from polio. (MU)

Fanshawe, Elizabeth. Rachel. Scarsdale, N.Y.: Bradbury Press, 1977. A colorful picture book for very young children about Rachel's life using a wheelchair for mobility.

Fassler, Joan. Howie Helps Himself. Chicago, IL: Albert Whitman & Co., 1975. A child with cerebral palsy wants more than anything else to be able to move his wheelchair by himself. (PM)

Grealish, Mary Jane, Von Braunsberg, & Grealish, Charles A. Amy Maura. Syracus, N.Y.: Human Policy Press, 1975. A gentle story of a child who has cerebral palsy. An account of how the child feels.

Killilea, Marie. Karen and With Love From Karen. Englewood Cliffs, N.J.: Prentice Hall, 1963. A mother tells how she and entire family helped Karen, born with cerebral palsy, overcome her handicaps.

The Light & Bright Writers' Club, The Wheelers and the Pushers! Racine Unified School District, 1700 Yout St., Racine, WI 53404, 1978. A book written by children who use wheelchairs so that "people will understand better how we feel about "living" in a wheelchair and we could give our friends tips and ideas about how to be a pusher or a wheeler."

Little, Jean. Mine for Keeps. Boston, MA: LIttle Brown & Co., 1962. Sally, who has cerebral palsy, returns from the special school where she has been living, and has to adjust her life on crutches to an energetic family and a regular school. Sequel: Spring Begins in March. 1966.

McNaughton, Shirley. Symbol Secrets. Ontario Crippled Children's Center, 1975. It is written through the Center in Canada about physically handicapped children who are "talking with symbols."

Numeroff, Laura Jaffee. Amy for Short. New York, N.Y.: MacMillan Publishing Co., 1976. (PM)

Neufeld, John. Touching. A 16 year old meets his new 16 year old stepsister, Twink, and it shocks him to discover she has cerebral palsy.

Pursell, Margaret, and Fassler, Maria S. A Look at Physical Handicaps. Mpls., MN: Lerner Publications, 1976. Black and white photographs and an easy text provide information in a nonfiction picture book for young children. (PM)

Robinet, Harriette. Jay and the Marigold. Chicago, Ill: Children's Press, 1976. A young boy born with cerebral palsy watches a flower grow and learns he too can grow and blossom. (PM)

Savitz, Harriett May. On the Move. New York, N.Y.: The John Day Co., 1973. A story about young paraplegics for whom wheelchair basketball is a means of fun and growing up. (MU)

Savitz, Harriett May. Fly Wheels Fly. New York, N.Y.: John Day, 1970. Two young paraplegics get caught up in training to enter the Paraolympics (wheelchair sports) in Israel. (MU)

Southall, Ivan. Let the Balloon Go. New York, N.Y.: St. Martin's Press. 1968. This story vividly portrays the tensions and imagination of a young boy with cerebral palsy. (MU)

White, Paul. Janet At School. New York, N.Y.: Thomas Y. Crowell Co. 1977. A 5 year old with spina bifida goes through the school day with her non-handicapped classmates. (PM)

Wolf, Bernard. Don't Feel Sorry for Paul. Philadelphia, PA: Lippincott, 1974. The story of a boy born with his hands and feet incompletely formed.

BOOKS FOR ADULTS

Ayrault, Evelyn West. Helping the Handicapped Teenager Mature. Association Press, 1971.

Ayrault, Evelyn West. Take One Step. Garden City, N.Y.: Doubleday & Co., 1963. The author is a psychology counselor who has cerebral palsy and counsels children with cerebral palsy and their parents.

Baker, Louisa. Out on a Limb. New York, N.Y.: McGraw-Hill Book Co., 1965.

Bleck, E., Nagel, Donald. Physically Handicapped Children: A Medical Atlas for Teachers. New York, N.Y.: Gruner Stratton.

Brown, Christy. My Left Foot. New York, N.Y.: Simon & Shuster, 1955. The author, able to control only his left foot, writes his autobiography.

Burton, Mary Louise Hart and Jennings, Sage Haiter. Your Child or Mine. New York, N.Y.: Coward-McConn, Inc. 1949. The effects of cerebral palsy on a child and the family are discussed in six short biographies.

Cerebral Palsy: Dr. Meyer Perlsteen Answers Questions Parents Ask. National Easter Seal Society for Crippled Children and Adults: Illinois.

Fergusson, Martha. Sexual Adjustment: A Guide for the Spinal Cord Injured. Accent on Living, Inc.: ILL. 1974.

Finnie, Nacie. Handling the Young Cerebral Palsied Child at Home. New York, N.Y.: E. P. Dutton, 1970.

Heisler, Verda. A Handicapped Child in the Family: A Guide for Parents. New York, N.Y.: Greene & Stratton, 1972.

Hewett, Shelia. The Family & the Handicapped Child. Chicago, ILL.: Aldine-Atherton, 1970.

Joel, Gil. So Your Child Has Cerebral Palsy. University of New Mexico Press, 1975.

Kovic, Ron. Born on the Fourth of July. New York, N.Y.: McGraw-Hill, 1975.

Massie, Robert & Suzanne. Journey. Alfred Knopf, 1975; Warner Books, 1976. Paperback. Parent's account of rearing a child with hemophilia.

Peiper, Elizabeth. Sticks and Stones. Syracuse N.Y : Human Policy Press. A mother's account of giving birth to and raising a son with spina bifida.

Peiper, Elizabeth. The Teacher and the Child With Spina Bifida. Booklet available from Spina Bifida Association of America, 343 S. Dearborn #319, Chicago, ILL. 60604.

Phelps, Winthrop, Hopkins, T. W., Cousin R. The Cerebral-Palsied Child: A Guide for Parents. New York, N.Y.: Simon and Schuster. 1978.

Pursell, Margaret. A Look at Physical Handicaps. For children ages 6-10. Minneapolis, MN.: Lerner Publications, 1976.

Readings in Physically Handicapped Education. Special Learning Corporation, 42 Boston Post Road, Builford, CT. 06437.

FILMS

Keep On Walking. (8 minutes, color, 1972, free.) March of Dimes, Box 2000, White Plains, N.Y. 10602. About an 11 year old boy born without arms who can do things with his feet amazingly well.

A Day in the Life of Bonnie Consolo. (17 minutes, color, 1975.) Barr Films, P.O. Box 5667, Pasadena, CA 91107. About a young woman born without arms who goes grocery shopping and does cooking with her feet doing the work of hands.

Della. Audio-visual Publication Dept., Kerney Rehabilitation Institute, 1800 Chicago Ave. So., Minneapolis, MN 55404. A young paraplegic woman lives in her own apartment and is active in her community.

Get it Together (color, 1978) a young man who uses a wheelchair because of an auto accident is a recreation therapist and shows how orthopedically handicapped people can be active in sports. Available from Advocacy for Handicapped Citizens, Inc., 111 Church St., Charleston, S.C. 29401.

A Different Approach. (21 minutes, color, 1978) A humorous and thought provoking film on the abilities of disabled persons. Film features some well known stars talking about handicaps. Available from Courage Center, United Cerebral Palsy, many libraries.

There's More to Me Than What You See. (28 minutes, color, 1981) Augsburg Publishing House, Audiovisual Dept., 426 S. 5th St., Box 1209, Mpls., MN 55440, (612) 330-3352. The film features two physically disabled adults and the parent of a multiply handicapped child discussing people's attitudes towards disabilities.

Additional films are listed in the Resource Section at the end of the manual.

ORGANIZATIONS

National organizations include:

National Easter Seal Society for Crippled Children & Adults
2023 W. Ogden Ave.
Chicago, ILL. 60612

National Foundation - March of Dimes
1275 Mamaronick Ave.
White Plains, N.Y. 10605

National Association for Muscular Dystrophy
810 7th Ave.
N.Y., N.Y. 20019

United Cerebral Palsy Association
66 East 34th St.
New York, N.Y. 10016

National Association for Multiple Sclerosis
205 E. 42nd St.
New York, N.Y. 20017

Spina Bifida Association of America
343 South Dearborn Street
Chicago, Ill. 60604

National Spinal Cord Injury Foundation
369 Elliot Street
Newton Upper Falls, MASS 02164

State organizations and agencies are listed in Additional Resource Section at end of the manual.

MENTAL RETARDATION

WHAT IS MENTAL RETARDATION?

Public Law 94-142 defines mental retardation as "significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance."

Analyzing this definition sheds light on some of the controversies in the field of mental retardation. Subaverage intellectual functioning refers to scoring two or more standard deviations below the mean on an intelligence test. Adaptive behavior refers to learned skills including social, self-help, academic and vocational. For many years, only intellectual function and not adaptive behavior was considered in labeling persons as being retarded, despite the fact that many of them functioned well outside of school settings.

Basically these definitions mean that a retarded person's mental growth and social development are slow compared to the average intellectual growth of most people.

According to the 1982-83 Minnesota Special Education Child Count, 13,371 mentally retarded children are receiving special education services. This includes children ages 0 to 21 with widely varying degrees of retardation. These children differ from each other just as all people do. Most cannot be identified by physical characteristics.

Certain common characteristics do exist. Mentally retarded persons all have difficulty in learning and applying knowledge. It takes them a longer time to learn how to do most of the things that are easy for other people. Learning does take place in the same general order as for normal children but at a much slower rate.

The degree of retardation may vary from mild to profound.

Mildly retarded persons differ from their normal peers primarily in the rate and degree of their intellectual development. Mild retardation may not become apparent until a child enters school. It has been estimated that over 90% of mental retardation falls within this level. (Usually IQ score of 50-75 combined with some deficits in adaptive behavior.)

Moderately retarded people can learn to take care of their personal needs and perform vocational tasks.

Severely retarded people can learn basic self-care.

Profoundly retarded persons may be largely dependent on others for their care.

Many school districts have special classes for mentally retarded students. Many will identify the mildly retarded as "educable mentally retarded" and identify another group of lower abilities as "trainable mentally retarded". Many educable mentally retarded (EMR) students spend at least part of each school day with a regular class and the remainder with a resource teacher.

The following characteristics are ones that occur more often in mentally retarded children than in age peers of normal mental ability. It is not likely that all of these will occur in any one child, but some combination of these characteristics are found in most mildly mentally handicapped children:

sensory and motor coordination handicaps
low tolerance for frustration
poor self concept
short attention span
below average language ability
below average ability to generalize and conceptualize
play interests below those of age peers

CAUSES OF RETARDATION

Retardation can result from infectious disease, abnormalities of gestation, dietary deficiencies, metabolic disorders, blood type incompatibility, environmental influence and many other factors. Although there is no conclusive evidence, many authorities believe that a majority of mildly retarded persons are retarded because of early cultural and social inadequacies.
One form of retardation is Down's Syndrome (some people refer to it as mongolism) which has a genetic cause. The child who has Down's Syndrome has one more chromosome than the average child, making every cell in his or her body abnormal. This accounts for a variety of physical defects which might be present in any individual with Downs Syndrome. Mental retardation almost always accompanies these physical differences.

SOME QUESTIONS AND CONTROVERSIES

Several court suits have been brought in recent years on behalf of children who were placed in classes for the mentally retarded and had not been properly diagnosed. Some had been mislabeled due to inappropriate or biased tests (e.g. not in child's primary language) or insufficient data (e.g. hearing impairment not considered).

These suits have raised questions about procedures for identification and placement of mentally retarded students. Care must be taken to assure that all measures used for assessment are appropriate and comprehensive for the child.

In the past, IQ scores were sometimes the only criteria used to determine mental retardation and were considered a permanent measure. However, there are indications now that IQ in some cases can be increased.

Many authorities believe that both mental retardation and learning disabilities are separate handicapping conditions. However, others disagree. Because both handicaps relate to how the brain and nervous system function - areas of study with many unknowns - it is understandable that such controversy should exist.

In some cases, the difference between mental retardation and a learning disability is easy to identify, but it may be more difficult in some others--particularly with young children.

Learning disability is discussed in a separate section of this manual.

FEELINGS ABOUT MENTAL RETARDATION

In the book, Feeling Free, (Addison-Wesley Press: Reading, MA 1979) one of the boys talks about his brother who is retarded.

> "Most people think that someone who's retarded can't do anything by himself, but Brian likes to do a lot of things on his own. He likes to ride his bike and he loves to swim. He also loves just to take a walk and to see people that he knows. And he's learning more about how to take care of plants than anybody I know.
>
> Some people ask me what it's like to have a brother who's retarded, and I really don't know how to answer that. Kids that are retarded don't all look alike or have the same problems as Brian. Each person has his or her own problems and his or her way of acting. Just like Brian does. To me, he's just a fun kid to have around. He's not a brother who's retarded; he is just Brian. I don't think about him any other way."*

PUPPET USED TO PORTRAY MENTAL RETARDATION

The puppet who portrays mental retardation is the same age as other puppets and attends a regular school, although placement is in a special education classroom for most of the day. He has participated in the Special Olympics, and likes to play baseball. He expresses concern about the fact that kids tease him, which hurts his feelings.

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*Reprinted from FEELING FREE, © 1979, American Institute for Research by permission of Addison-Wesley Publishing Company, Inc., Reading, Mass. 01867. All rights reserved.

SIMULATION ACTIVITIES ON RETARDATION

1. "WRITING"

EQUIPMENT: Pencil, Paper.

Mentally retarded children work very hard at learning things. This experiment illustrates how hard retarded persons work at writing.

Ask the children each to write a sentence on any subject--but every word in the sentence must have two syllables.

Discuss whether this was hard. What if they had to work this hard to learn everything?

2. "DIRECTIONS"

EQUIPMENT: None.

Explain that many retarded children have a hard time learning to follow even a few simple directions. Have the children stand. Tell them the teacher is going to read them a list of directions and then they are to repeat them in order. Give 10-15 directions rapidly (e.g. stand, sit, clap twice, touch your head, touch your knee, jump, etc.)

Perhaps only a few children should try this while the others watch. Talk with the children about how even a few simple directions may seem this hard to a retarded child.*

3. "PIRATES SEARCH FOR TREASURE"

EQUIPMENT: Paper, crayons, pencils.

Some mentally retarded children cannot read at all. Discuss what difficulties that would present in playing some games. Have the children pretend that they are pirates and need to follow a map to find a treasure. One of their friends who will participate is mentally retarded and can't read. How could they make the map so everyone could read it?

4. "MITTEN GAME"

EQUIPMENT: Mittens, or tape-puzzles.

Some mentally retarded people have trouble making their fingers do what they want them to do. Have several children put on mittens or tape some of their fingers together and try to do a puzzle.

*Barnes, Berrigan, and Biklen. What's the Difference? Syracuse, New York: Human Policy Press. 1978. page 41.

RESOURCES

BOOKS FOR CHILDREN

(P = Primary, M = Middle, U = Upper grade level recommendations)

Adkins, Jan. Symbols: A Silent Language. New York, N.Y.: Walker, 1978. (PMU)

Baldwin, Anne N. A Little Time. New York, N.Y.: Viking Press, 1978. (MU)

Brightman, Alan. Like Me. Boston, Mass.: Little, Brown & Co., 1976. Photographs and poems designed to bring the word "retarded" into open discussion among grade school children. (PMU)

Byars, Betsy. The Summer of the Swans. New York, N.Y.: Viking Press, 1970. A beautifully written story about 14 year old Sara and the interrelationships within her family, which includes Charlie, a "retarded" brother.

Carpelan, Bo. Bow Island. New York, N.Y.: Delacorte Press, 1971. An 11 year old boy, who is retarded, goes on a summer holiday. He is gentle, in tune with nature, and has much to give.

Christopher, Matthew. Long Shot for Paul. Boston, Mass.: Little, Brown & Co., 1966. (MU)

Cleaver, Vera and Bill. Me Too. Philiadelphia, PA.: J. B. Lippincott, 1974. The Cleaver family includes twins, one of whom is retarded. (U)

Fassler, Joan. One Little Girl. New York, N.Y.: Behavioral Publications, 1971. Although she is somewhat retarded, Laurie learns that she is only slow in some things.

Forrai, Maria & Rebecca Anders. A Look at Mental Retardation. Minneapolis, Minn.: Lerner Publications Co., 1976. Easy to read text and sensitive pictures. (MU)

Friis-Baasted, Babbis. Don't Take Teddy. New York, N.Y.: Scribner & Sons, 1967. Teddy, who is mentally retarded, accidentally hurts someone, and his brother, Mickel, runs away with him. Dynamics of family living are dealt with great honesty and insight.

Grollman, Sharon Hya. More Time to Grow. Boston, Mass.: Beacon Press, 1977. (PM)

Klein, Gerda. The Blue Rose. New York, N.Y.: Holt, Rinehart & Winston, 1975. Jenny is different from others and needs more love and affection. (MU)

Koob, Theodore. Deep Search. Philadelphia, PA.: J. B. Lippincott, 1969. A young girl is in disagreement with her parents about the future of her 10 year old brother, who is mentally retarded.

Meyer, Robert. Like Normal People. New York, N.Y.: McGraw-Hill, 1978. The book describes the growing up years of the author's retarded brother. A well-written look at the past. (MU)

Ominsky, Elaine. Jon O.: A Special Boy. New Jersey: Prentice-Hall, Inc., 1977. (PM)

Reynolds, Pamela. A Different Kind of Sister. New York, N.Y.: Lathrop, Lee and Shepard Co., 1968. (MU)

Sobol, Harriet Langsam. My Brother Steven is Retarded. New York, N.Y.: MacMillan Co., 1977. (U)

BOOKS FOR ADULTS

Attwell, Arthur & Clabby, Ann. The Retarded Child, Answers to Questions Parents Ask. Western Psychological Services, 1971. Good answers to questions often asked.

Hutt, Max L. & Gibby, Robert Gwyn. The Mentally Retarded Child, Development, Education and Treatment. Third Edition. Boston, Mass: Allyn & Bacon, 1976.

Isaacson, Robert. The Retarded Child. Niles, Illinois: Argus Communications, 1974. This book gives resources helpful to parents.

Koch, Richard & Koch, Kathryn. Understanding the Mentally Retarded Child: A New Approach. New York, N.Y.: Random House, 1975. Information and the need for advocacy.

Perske, Robert. New Directions for Parents of Persons Who Are Retarded. Abingdon Press, 1973. An excellent book about parent's feelings and hopes.

Robinson, Nancy M. & Robinson, Halbert B. The Mentally Retarded Child. Second Edition. New York, N.Y.: McGraw-Hill Book Co., 1965.

Strauss, Susan. It is Well with the Child? A Parent's Guide to Raising A Mentally Handicapped Child. New York, N.Y.: Doubleday & Co., 1975. It is worthwhile reading for parents and professionals--written by a parent.

FILMS

Let Me Try. (7 minutes, color, sound, 1977.) Available from Audio Visual Library Service, 3300 University Ave. S.E., University of Minnesota, Mpls., MN 55414. Produced by Alan P. Sloan - Avatar Learning Inc./Encyclopedia Britannica. Billy brings his mentally retarded sister along to a friend's house to help build a tree house, but grandmother does not think it's safe to allow the little girl outside with others. (PM)

Board and Care. (27 minutes, color, sound, 1980.) Available from Audio Visual Learning Library Service, 3300 University Ave. S.E., University of Minn., Mpls., MN 55414. Produced by Ron Ellis, Pyramid Films. This is a sensitive story about the desires of two teenagers with Downs Syndrome for a meaningful relationship, but how circumstances thwart their friendship. (U)

All My Buttons. (28 minutes, color, sound) Available from Audio-Visual Center, University of Kansas, 746 Massachusetts, Lawrence, KS. 66044. Deals with the problems in the normalization of developmentally disabled citizens.

Kurt: A Retarded Child in the Family. (11 minutes, black and white, sound, 1973.) Available from Polymorph Films, 331 Newbury St., Boston, MA 02115. The film centers on a mother's struggle to work out her feelings and begin to enjoy her son who has Down's Syndrome.

James and John. (23 minutes, color, sound, 1973.) Available from Peach Enterprises, 4649 Gerald, Warren, MI 48092. Twin boys with Down's Syndrome are members of a loving family who help them grow comfortably in the community.

Try Another Way. (27 minutes) Available from Film Productions of Indianapolis, 128 E. 36th St., Indianapolis, IN 46205. Introduction to the techniques of Dr. Marc Gold, demonstrating the competence of retarded people.

Who's Handicapped? (34 minutes, color.) Available from Insight Exchange, P.O. Box 42585, San Francisco, CA 94101. A British documentary film showing three approaches for helping mentally retarded and emotionally disturbed children included a class where disabled and non-disabled children learn from each other.

See Additional Resources Section at the end of the manual.

ORGANIZATIONS

National organizations include:

National Association for Retarded Citizens
2709 Ave. E. East
Arlington, TX 76011

United Association for Retarded Children
225 East Michigan St.
Milwaukee, WISC. 53202

The Joseph P. Kennedy Jr. Foundation
1701 K St. N.W.
Washington, D.C. 20006

People First
P.O. Box 12642
Salem, Oregon 97308

State organizations and agencies are listed in Additional Resource Section at end of packet.

LEARNING DISABILITIES

WHAT IS A LEARNING DISABILITY?

In the State of Minnesota, there are 35,644 children who have been identified as having a specific learning disability and who are receiving special education services (1982-83 statistics).

According to Public Law 94-142, a "learning disability" is "a disorder in one or more of the basic psychological processes involved in understanding and using language spoken or written which may manifest itself in an imperfect ability to listen, think, speak, read, spell or to do mathematical calculations."

The National Advisory Committee on Handicapped Children, U.S. Office of Education, adds the following to the definition of learning disabilities: "Learning Disability includes conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance or to environmental disadvantage."

Minnesota laws include in this category certain behavior problems that are labeled "special learning and behavior problems" (SLBP).

Most children with learning disabilities are average or above average in intelligence and may perform quite well in some academic areas. However, they have difficulty learning, and modifications in teaching methods should be utilized in the classroom. Children with learning disabilities may have problems learning to read, write, spell, compute, or listen. They may also have difficulty expressing their thoughts verbally or in writing.

Some of the specific disorders which are considered learning disabilities are listed below:

DYSLEXIA: Basically, this word means difficulty with learning to read. It may involve several different factors including reversals, substitutions, confusion of symbolic meanings and others.

DYSGRAPHIA: Trouble in learning to write, including spelling difficulties.

DYSCALCULIA: Difficulty with mathematics.

PERCEPTUAL DISORDERS: A message from one of the senses is not received and/or interpreted properly by the brain. A visual perception disorder means that the visual message the eyes pick up is not understood correctly in the brain and its results might include reversals or an inability to distinguish the difference in shapes. Auditory perception disorders include problems in discriminating sounds, comparing them with other sounds, and making the sound and sight blendings so essential in learning to read. Auditory perception difficulties may be a factor in spoken language problems.

MEMORY DISORDERS: Messages from one of the senses are not remembered properly or consistently by the brain. A child might have visual or auditory memory problems.

There are some characteristics that seem to be displayed more frequently by learning disabled children than by other children. No one child will show all of these characteristics; but the following list may provide some examples of behaviors and some clues for identifying children with learning disabilities:

HYPERACTIVITY: Child moves nearly all the time.

HYPOACTIVITY: Child is abnormally inactive.

LACK OF COORDINATION

PERSEVERATION: Child repeats persistently actions or words.

INATTENTION

OVERATTENTION: child focuses inordinately on one particular object.

PERCEPTUAL DISORDERS

MEMORY DISORDERS

UNEVEN SKILL LEVELS IN DIFFERENT AREAS

One characteristic is common to all learning disabled children: a significant educational discrepancy between expected achievement and actual achievement.

EDUCATIONAL METHODS

It is very important for students with learning disabilities to be identified and tested in order to determine the specific areas in which the student is experiencing difficulty. A comprehensive assessment helps to identify the learning problem that is causing the severe discrepancy between potential and achievement. Specially trained teachers can provide different types of help depending on the child's needs. Sometimes, special materials for the child and consultation with the classroom teacher will work well. In other situations, a child will benefit from receiving special help individually or in a small group from a resource teacher for about an hour each school day. The majority of students with learning disabilities in Minnesota receive this type of resource assistance. In some cases, learning disabled students spend most of their school day in a special classroom setting.

There are many materials available to help students learn to either compensate for their disorder or learn in other ways.

Many famous people were probably learning disabled--Albert Einstein, Winston Churchill, and Woodrow Wilson, to name just a few. Thomas Edison had a difficult time learning to read and write. He wrote the following letter to his mother at age 19:

> "Dear Mother--started the store several weeks. I have growed considerably I don't look much like a boy now--hows all the folk did you receive a box of books from Memphis that he promised to send them--languages. Your son Al."

FEELINGS ABOUT LEARNING DISABILITIES

"Learning new things can be really exciting if you get into them a lot and really work at them. That's what rock climbing and skateboarding were like for me. When I learn something new I just get really excited, and I keep doing it over and over again. But learning has not always been an easy thing for me.

"School is probably the best example of something that has been really hard for me, almost all the time. When the other kids were going outside for recess, I would always have to stay inside to do extra work or to finish stuff that I was having trouble with. For me that meant reading, spelling, and writing most of all.

"I could do just about anything else, but those three things were real problems for me. It seemed like everyone else could breeze right through them, but I'd always get stuck.

"It took me a while to understand that I had a specific learning problem."

The child who expressed these feelings so well happens to be part of the cast of the television series "Feeling Free", and whose words were published in the book, Feeling Free.*

Most learning disabled students must cope with frustration of not being able to keep up with classmates during their early years of school, but with special education services they can make progress and even excel.

SIMULATION ACTIVITIES FOR CHILDREN

1. "READING PUZZLE"

EQUIPMENT: Pencil and paper.

Some children with learning disabilities have a hard time telling one letter from another.

Make up 10 symbols for words the children can read. Show them the list of symbols along with the corresponding word and give them only a minute or two to study it. Then show the children the symbols in a different order and ask them to write the correct word next to each symbol. Make them hurry.

Talk about how the difficulties they experienced may be what it is like for some children learning to read. Ask them how they felt and what would have made it easier for them to learn the symbols. Relate their answers to how people with learning problems need other ways to learn things.

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2. "WHAT WAS THE PAGE?"

Equipment: Book, pencil and paper.

This activity also shows how learning disabled students need activities adjusted. It emphasizes how a child might feel.

Tell the children you are going to pretend for a while. Then very abruptly give them the wrong page for an assignment--one much too difficult for them. Tell them not to bother you for help as you are busy. Discuss how they felt after the play-acting is finished.

3. "CRAZY WRITING"

EQUIPMENT: Mirrors, pencils, paper.

To many children with learning disabilities, letters do not appear the same as they do to most people.

Have the children work in pairs. Have one child write a message and tape it to his partner's forehead. That child must try to read it in the mirror.

For another experience,have them try writing a sentence with their non-dominant hand.

RESOURCES

BOOKS FOR CHILDREN

(P = Primary, M = Middle, U = Upper grade level recommendations)

Albert, Louise. But I'm Ready to Go. Scarsdale, N.Y.: Bradbury Press, 1977. Story of a 15 year old, Judy Miller, who has a learning disability. (MU)

Cleary, Beverly. Mitch and Amy. N.Y.: Morrow/Morrow, Jr., 1967. Mitch's school problems are typical of L.D. Some of them are partially remedied by his twin sister, Amy. (MU)

Gardner, Richard. The Children's Book About Brain Injury. Massachusetts. Association for Children with Learning Disabilities, Framingham, MA 1966.

Hayes, Marvell. Tuned In--Tuned On. Academic Therapy, San Rafael, CA., 1975. About children with learning disabilities, written for children with learning disabilities.

Konigsburg, E.L. "Inviting Jason," in Altogether, One at a Time. N.Y., N.Y.: Atheneum, 1971.

Lasker, Joe. He's My Brother. Chicago, IL.: Albert Whitman, 1974. The book tells about the life of a child with learning disabilities and his family.

Smith, Doris Buchanan. Kelly's Creek. N.Y.:Crowell, 1974. (MU)

BOOKS FOR ADULTS

Brutten, Richardson, S. & Mangel, C. Something's Wrong with my Child. New York, N.Y.: Harcourt, Brace, 1973. For parents and other concerned lay persons. This book describes how to recognize the learning disabled child and where to go for help.

Clarke, Louise. Can't Read, Can't Write, Can't Talk Too Good Either: How to Recognize Dyslexia in Your Child. New York, N.Y.: Walker, 1973. Mike had an IQ of 138 but was unable to read or write. This book describes the therapies that proved successful in overcoming his disability.

Gardner, Richard A., M.D. MBD: The Family Book about Minimal Brain Dysfunction. (Part II for children). New York, N.Y.: Jason Aronson, Inc. 1973.

Glasser, William. Schools Without Failure. New York, N.Y.: Harper & Row, 1969. Details the shortcomings of current education and proposes a new program based on increased involvement, relevance, and thinking to reduce school failure.

Golik, M. A Parent's Guide to Learning Problems. Quebec, Canada: Quebec Association for Children with Learning Disabilities, 1970.

Hayes, Marnell. Oh Dear: Somebody Said Learning Disabilities. San Rafael, CA.: Academic Therapy Publishers, 1975. Easy to read information on understanding, recognizing and coping with learning disabilities.

Kronick, Doreen. They Too Can Succeed: A Practical Guide for Parents of Learning Disabled Children. San Rafael, CA: Academic Therapy Publishers, 1969. Written primarily for parents to assist them in helping their learning disabled children.

Kronick, Doreen. A Word or Two About Learning Disabilities. San Rafael, CA: Academic Therapy Publishers, 1973.

Levy, Harold B. Square Pegs, Round Holes. Boston, MASS.: Little, Brown & Co., 1973. A sensitive and sensible look at the learning disabled child and what can be done to help him. (By a practicing pediatrician.)

McCarthy, J. J. and McCarthy, J. F. Learning Disabilities. New York, N.Y.: Allyn & Bacon, 1969. This short,easy to read book gives clear descriptions of the range of views in this field.

Osman, Betty B. Learning Disabilities, A Family Affair. New York, N.Y.: Random House. 1979.

Smith, Sally L. No Easy Answers: The L.D. Child at Home and School. (2nd Edition) Bantam Publishers, 1980-81.

Waugh, Kenneth. Diagnosing Learning Disorders. Merrill, 1971. Authors present detailed descriptions of the 12 most common learning disorders.

Weiss, Helen. Home is a Learning Place. Boston, Mass.: Little, Brown & Co., 1976. To help parents cope effectively.

Weiss, Helen & Martin. Survival Manual: Case Studies and Suggestions for the Learning Disabled Teenager. Treehouse Associates, 1974.

Wender, Paul. The Hyperactive Child: A Handbook for Parents. Crown, 1973. Describes basic characteristics of the hyperactive child, discusses causes and treatment.

FILMS

Bobby: A Child With Minimal Brain Dysfunction. (24 minutes, color, 1975). Available from Abbott Laboratories, 14th & Sheridan, North Chicago, ILL. 60064. This film raises questions about medications of disabled children.

Mark. (10 minutes, color, 1978.) Available from Audio Visual Library Services, 3300 University Ave. S.E., University of Minnesota, Mpls, MN 55414. Produced by Encyclopedia Britannica: W.G.B.H. TV. Teenager Mark has a reading disability and tells of determination to cope with the problem with the help of his father who was also learning disabled.

ORGANIZATIONS

National organizations include:

ACTION for Brain Injured Children
Osceola, WI 54020
Monthly information bulletin, directory and treatment service.

Association for Children With Learning Disabilities
5225 Grace St.
Pittsburgh, PA 15236

National Association for Brain Injured Children
95 Madison Ave.
New York, N.Y. 10016

Orton Society
8415 Bellona Lane
Towson, Maryland 21204

State organizations and agencies are listed in Additional Resource Section at end of packet.

MULTI-HANDICAPPED

WHAT IS MULTI-HANDICAPPED?

The Federal law, Public Law 94-142 defines another category of disability--multi-handicapped. Multi-handicapped refers to children with more than one serious handicap (e.g. mentally retarded and blind, or orthopedically handicapped and deaf, etc.), the combination of which causes such severe educational problems that they cannot be accomodated in special education programs solely for one of the impairments. These children present very special needs for their families and educators, and are often in special classrooms.

Other terms often used by school systems and educators to describe this population of students may include "severely handicapped," "multiply handicapped," and "severely and profoundly handicapped."

ORGANIZATIONS

National Organization:

TASH: The Association for the Severely Handicapped
7010 Roosevelt Way N.E.
Seattle, Washington 98115

State Organization:

MNASH: Minnesota Association for the Severely Handicapped
Kay Zwernik
Metropolitan DAC Council
Suite 329
529 Jackson
St. Paul, MN 55101

EMOTIONAL DISTURBANCES

WHAT IS AN EMOTIONAL DISTURBANCE?

Public Law 94-142 includes the phrase "seriously emotionally disturbed" to describe children who should be served under its provisions. These children exhibit one or more of the following characteristics over a long period of time and to a marked degree, which adversely affect their educational performance:

a. an inability to learn which cannot be explained by intellectual, sensory, or health factors
b. an inability to build or maintain satisfactory interpersonal relationships with peers and teachers
c. inappropriate types of behavior or feelings under normal circumstances
d. a general pervasive mood of unhappiness or depression
e. a tendency to develop physical symptoms or fears in association with personal or school problems.

The Dec. 83 Minnesota Child Count indicated 6,744 school aged children with emotional disabilities are receiving special education services. Under the law, children who might be called "autistic" also are included in this category, although the classification of autism as an emotional disturbance is currently being questioned.

AUTISM

WHAT IS AUTISM?

Autism is a brain disorder that severely impairs the way sensory input is assimilated causing problems in communication, social behavior, and irregularity in learning. The essential features typically appear prior to three years of age and include several factors.

There are disturbances of developmental rates and sequences. Normal coordination of motor, social-adaptive, and cognitive skills is disrupted. Delays, arrests, and/or regressions occur among or within each of these areas.

There are disturbances of responses to sensory stimuli, usually over-reaction or under-reaction. Typical behaviors may include such things as close visual scrutiny, unusual responses to sound, touch, and smell, whirling about without dizziness, and unusual posturing.

Often speech, language awareness, and nonverbal communication are affected in an autistic child. The child may find it difficult to relate appropriately to people, events, and objects, preferring self-stimulating behaviors such as finger flexing and slapping the face, etc.

Autism is estimated to affect 4 or 5 children out of every 10,000 births and is four times more common in boys than girls. It has been found throughout the world in families of all racial, ethnic, and social backgrounds. Most scientists now agree that the causes of autism are physical.

RESOURCES

BOOKS FOR CHILDREN

(P = Primary, M = Middle, U = Upper grade level recommendations)

Copeland, James. For the Love of Ann. New York, N.Y.: Ballantine Books, 1973.

Gold, Phyllis. Please Don't Say Hello. Human Science Press: 1975. A 9 year old autistic boy, with the love of his family, receives the love of the neighborhood children.

Greenfeld, Josh. A Child Called Noah. New York, N.Y.: Holt Rinehart & Winston, 1972. A story about an autistic child. (U)

Greenfeld, Josh. A Place for Noah. New York, N.Y.: Holt, Rinehart, Winston, 1978. (U)

BOOKS FOR ADULTS

Craig, Eleanor. P.S. You're Not Listening. Signet Books, 1972. A true account of one teacher's experiences.

Doernberg, Nanette; Rosen, Bernard; & Walker, Tomannie T. A Home Training Program for Young Mentally Ill Children. League School for Seriously Disturbed Children, 567 Kingston Ave., Brooklyn, N.Y. 11302, 1968. 54 pages free (single copy requests). This school has developed a training program for parents of severely emotionally disturbed children. The program stresses the importance of the parents' role as vital partners in their children's progress.

Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child. 1943.

Kanner, L. Childhood Psychosis: Initial Studies & New Insights. 1975.

Lovaas, Ivar. The Autistic Child: Language Development Through Behavior Modification. New York, N.Y.: Irvington Publishers, 1976.

Oliver, Betty. The ABC's of Hanging on While Raising a Family With A Disturbed Child. Claitor's Publishing Division, 3165-S Acadian at 1-10 P.O. Box 3333, Baton Rouge, LA 70821, 1976. Written by a parent of a young emotionally disturbed child.

Park, Clara Clairborne, and Lee Shapiro. You Are Not Alone. Boston, Mass.: Little Brown & Co., 1976. A comprehensive guide to understanding mental illness.

Ricks, D. M. and Wing, L. Language, Communication, and the Use of Symbols in Normal and Autistic Children. Journal of Autism and Childhood Schizophrenia, 1975.

Rimland, Bernard. Infantile Autism: The Syndrome and Its Implications for a Neural Theory of Behavior. New York, N.Y., Appleton-Century-Crofts, 1974.

Ritvo, Edward (Ed.) Autism: Diagnosis, Current Research and Management. New York, N.Y.: Spectrum Publications, Inc., 1976.

Schopler, Eric and Reichler, Robert. Psychopathology and Child Development: Research and Treatment Development. New York, N.Y.: Plenum Publishing Corp., 1976.

Wing, Lorna. Autistic Children: A Guide for Parents and Professionals. New York, N.Y.: Brunner/Mazel, Inc., 1972. A good guide.

TECHNIQUES FOR MANAGEMENT

Donnellan-Walsh, A., Gossage, L. D., LaVigna, G. W., Schuler, A. & Traphagen, J. D. Teaching Makes a Difference: A Guide for Developing Successful Classes for Autistic & Other Severely Handicapped Children. Santa Barbara County Schools, 1976.

Everard, M. An Approach to Teaching Autistic Children. Great Britain: Pergamon Press, 1976.

Fenichel, Carl. Psycho-Educational Approaches for Seriously Disturbed Children in the Classroom. Reprinted from Intervention Approaches in Educating Emotionally Disturbed Children. The League School, 567 Kingston Ave., Brooklyn, N.Y. 11203, 1966. This helpful booklet tells about the exciting work done at a famous school in developing educational evaluation and planning for severely disturbed children. Describes the ongoing process of assessing an individual psychoeducational plan so that it continues to help a child grow.

Hamblin, R. L., etc. al. The Humanization Process: A Social, Behavioral Analysis of Children's Problems. New York, N.Y.: John Wiley & Son, 1971.

Kozloff, M. Teaching the Autistic Child: A Parent Teaching Program. Illinois: Research Press Co., 1973.

Kozloff, M. A. Reaching the Autistic Child: A Parent Training Program. Champaign, ILL: Research Press, 1973.

Long, Nicholas, Editor. Conflict in the Classroom: The Education of Children With Problems. Belmont, CA: Wadsworth Publishing Co., Inc., 1976. A collection of essays focusing on educational approaches that work.

Swift, Marshall S. & George Spivak. Alternative Teaching Strategies. Champaign, ILL.: Research Press, 1975. Based on a long series of research projects, this book offers teachers a vast storehouse of workable ideas and techniques to reach troubled children and improve their capacity to learn.

Thompson, T. & Grabowski, J. Behavior Modification of the Mentally Retarded. 2nd edition. New York, N.Y.: Oxford University Press, 1977.

FILMS

For teachers: He Comes From Another Room. (28 minutes, color, National Institute of Mental Health, 1974). An excellent documentary in which teachers confront the problems of integrating emotionally and physically disabled children into the mainstream of public education. Available from National Audio Visual Center, GSA, Reference Section SG, Washington, D.C. 20409.

Let's Be Friends. (7 minutes, color, sound, 1977.) Available from Audio Visual Library Service, 3300 University Ave. S.E., Mpls., MN 55414. Produced by Encyclopedia Britannica. An emotionally disturbed child reacts rudely when the teacher leaves the room in charge of another student. The children remember the teacher's advice. (PMU)

ORGANIZATIONS

National organizations include:

National Association for Mental Health
1800 North Kent Street
Rosslyn
Arlington, Virginia 22209

National Society for Autistic Children
169 Tampa Avenue
Albany, New York 12208

State organizations and agencies are listed in Additional Resource Section at end of packet.

The material on autism was contributed by Joan Schoepke, parent of an autistic child.

OTHER HEALTH IMPAIRMENTS

WHAT IS "OTHER HEALTH IMPAIRED"?

For children who have medical problems that have a bearing on their academic and extra-curricular participation, a special category called "other health impairments" exists.

Public Law 94-142 defines other health impaired as having "limited strength, vitality or altertness, due to chronic or acute health problems such as heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance." In Minnesota, 826 children with health impairments are receiving special education service (1982-83).

These children are entitled to all the laws and rights and special education considerations covered under the term "handicapped child."

Following are some of the health impair ments:

CYSTIC FIBROSIS

WHAT IS CYSTIC FIBROSIS?

An inherited condition in which the mucous glands (including those in the lungs) secrete thick sticky mucous, cystic fibrosis results in digestive and breathing problems that severely affect a child's health.

The mucous produced by cystic fibrosis affects the production of digestive enzymes which break down food in the digestion process. Children take medication to help control these problems.

In the lungs, the sticky mucous interferes with the intake transfer of oxygen from the air to the blood, and the exhalation transfer of carbon dioxide. Children receive postural drainage therapy (a routine pounding on the chest in such a way as to loosen the mucous) and aerosal therapy. The frequency of these routines depends on the condition of the child.

Other problems associated with cystic fibrosis include frequent bouts of pneumonia and often a need for extra salt.

Special education is available to these children when regular education programs are unable to meet their needs because of the complications of cystic fibrosis.

DIABETES

WHAT IS DIABETES?

Diabetes is a metabolic disorder involving the inability of the pancreas to produce a sufficient amount of the hormone insulin. As a result, the body cannot properly utilize and store sugar.

A child or adult with diabetes must adhere to a careful diet, a good balance between rest and activity, and in many cases, daily injections of insulin. If any one of these is out of proportion, a diabetic reaction may set in. Parents, teachers, and others need to be aware of the possible reactions and how to counteract them.

Diabetes comes under the jurisdiction of special education laws only in so far as the disability interferes with the child's educational progress. For some children, no special education services are necessary. For others, many absences or frequent diabetic reactions may necessitate special programs for adaptive physical education, classroom work, and related services.

EPILEPSY

WHAT IS EPILEPSY?

Epilepsy is a chronic disability that can affect persons of all ages. It is not a disease, but rather a disorder of the brain characterized by temporary but recurring seizures in which there are uncontrolled electrical discharges from the brain cells. During the brief time of these electrical discharges, the person's consciousness, behavior, bodily functions, sensations, and motor activity are altered.

The Epilepsy Foundation of America notes that "epilepsy is a medical condition that is varied and complex; hence all persons with it are not affected similarly. The impact on individuals runs the gamut from those who are able to live normal or near-normal lives, to those who are severely impaired by epilepsy and its consequences." It is estimated that at least 2 million Americans have active epilepsy, and that about 100,000 new cases develop each year, three-fourths of these in children and adolescents.

Seizures differ in frequency and in the type of exhibited behavior. The three most common types of seizures are:

> Absence (petit mal): a very brief (3-30 second) lapse of consciousness with a blank stare, rapid eye blinking, or eyes rolling upward. The child does not hear or see anything during this lapse. This seizure is frequently not detected because it is over so rapidly and the child resumes activity immediately.
>
> Generalized tonic-clonic (grand mal): is more alarming to the observer because of the sudden loss of control. The child loses consciousness and falls to the ground. The body stiffens (tonic phase) and then begins a rhythmic jerking of all parts of the body (clonic phase). Breathing is labored or may appear to stop, causing the child to turn blue. Loss of control of the bladder may also occur. The seizure can last from 1-3 minutes and may be followed by confusion, muscle fatigue, and headache. Only if the child passes from one seizure into another without regaining consciousness or if the seizure lasts more than 10 minutes should medical help be sought.
>
> Complex partial (psycho-motor): seizures may last from 2-4 minutes. Behavior during the seizures varies from person to person, but for any one individual the same behavior regularly occurs. Some common behaviors include staring, poorly coordinated automatic behaviors (such as walking aimlessly around the room), incoherent or irrelevant speech, and lip smacking.

In most instances the cause of epilepsy is unknown. Since it is not a disease, it is not contagious. Some known causes of a seizure disorder are head injuries, fever, convulsions, and diseases of the brain such as meningitis or encephalitis

The majority of children with epilepsy will have good control of their seziures through daily use of one of the many antiepileptic medications available, and will have only the normal problems of childhood. Some children with epilepsy will have difficulty in school, and P.L. 94-142 entitles them to the aid they need. An IEP is appropriate for these children.

SAFETY CARE. Most seizures can be controlled with medication, which is prescribed by a doctor for a particular person. Different kinds of medication help different forms of epilepsy. Children and adults with epilepsy can participate in many kinds of sports or activities. Exercise, playing sports, or having fun will not make a person have more seizures.

However, if some types of seizures do occur, important help can be provided by friends, teachers, or bystanders. (No special help is needed for absence seizures.)

For persons experiencing a generalized tonic-clonic (grand mal) seizure:

1. Clear things out of the way so the person won't be hurt by banging against or falling on something sharp or hazardous.
2. Place a folded jacket, blanket, or cushion under the person's head for comfort.
3. Don't place anything hard in the mouth--teeth or jaw may be injured. (The tongue CANNOT be swallowed--it's attached.)
4. Stay by the person until the seizure is over, talking softly and calmly.
5. Call a doctor if there is more than one seizure in rapid succession or if the person is in medical danger.

For someone experiencing a complex partial (psycho-motor) seizure:

1. Guide the person away from anything dangerous, if he or she is aimlessly walking around.
2. Stay with the person until the seizure is over.

PUPPET USED TO PORTRAY EPILEPSY

The puppet who portrays epilepsy appears to be a nonhandicapped puppet, but has had epilepsy since birth. She is on medication which controls her seizures, but she remembers what it is like to have had a seizure. She mentions ways a friend can help her if a seizure should occur, and emphasizes that despite epilepsy she can do almost anything.

FEELINGS ABOUT EPILEPSY

As the Epilepsy Foundation of America stresses, "Understanding epilepsy includes not only understanding seizures and their treatment, but also the social and psychological consequences that accompany the medical condition. For many persons, the social and psychological consequences and problems associated with epilepsy are more handicapping than the seizures themselves."

The child with seizures may have a variety of feelings as evidenced by the statements from Gripping Tales or Living With Seizures, (Wisconsin Epilepsy Association, Madison, Wisconsin):

> "...Just when I think I've got it altogether - another seizure comes. It feels like my body is coming apart."

In the book Exceptional View of Life (E. J. McGrath, Jr. Island Heritage Ltd: Honolulu, 1977) a person with epilepsy says:

> "When I have a seizure and somebody sees it they get scared and wonder what's up. Once when we went on a field trip, the bus left me off and a friend was taking me home. I had a seizure and had to lay down in the driveway. The lady was real scared. She jumped out of her car. She didn't know what to do. I don't want them to get worried, but there's no way I can stop them from worrying.
>
> I'm happy that people care when they see me and try to help me. I love everybody that cares for me--my parents, my teachers, my doctor who is trying so hard to get me well. They have special feelings. In other words, they have love for me. People treat me very kindly, with respect. Sometimes when I'm in a park or something and they're fifty feet away and I'm going to have a seizure, I can't just walk over and tell them. It doesn't really bother me so much. I've done it so many times."

QUESTIONS OUR PUPPET HAS BEEN ASKED

CAN I CATCH EPILEPSY?

No, you can't catch epilepsy because it's not a disease.

DOES IT HURT?

No, epilepsy itself doesn't hurt, but if I bang against something when I have a seizure, I may get hurt.

IS IT SCARY TO HAVE A SEIZURE?

Well, when I'm having a seizure, I don't know it-so I'm not scared. But many people seem scared when they see it. I wish this wasn't so.

HOW DID YOU GET IT?

I don't know how I got it. Mom says I've had epilepsy ever since I was real little. But some people have it as a result of head injuries in car accidents, motorcycle accidents, etc.

AREN'T YOU AFRAID TO GO PLACES IN CASE YOU HAVE A SEIZURE?

I used to be, but I love to go places, so I don't worry about it. The medicine I take now helps and I have very few seizures.

CAN YOU PLAY SPORTS?

Sure, as long as I take my medication I can play any sport or game I want to. In fact, when I'm 16, if I haven't had any seizures for a year I can even get a driver's license.

SIMULATION ACTIVITIES

Simulation activities are available as part of the "Epilepsy Is..." kit (see Resources-Audiovisual materials). Due to the nature of the activities, it is advised not to use them unless they are part of the total lesson. Children need to understand why a person with seizures exhibits the behaviors that are part of the simulations. They also need to discuss the feelings involved and how to help the person who experiences these feelings.

> The information on epilepsy was contributed by Sister Ann Vivia Walter of the Comprehensive Epilepsy Program.

RESOURCES

BOOKS FOR CHILDREN

(P = Primary, M = Middle, U = Upper grade level recommendations)

All About Epilepsy - Me and My World. Washington, D.C.: Epilepsy Foundation of America. 1981. Excellent stories for children about epilepsy (PMU)

Because You Are My Friend. Washington, D.C.: Epilepsy Foundation of America. In the first person narrative, a boy confides to his friend that he has epilepsy and proceeds to explain all of the ramifications. (PM)

Gripping Tales or Living With Seizures. Wisconsin Epilepsy Association, 1245 E. Washington Ave., Madison, Wisconsin 53703. A book written by children and for children. Original art work of the children illustrating their views of living with seizures. (M)

McGrath, E. J., Jr. Exceptional View of Life. Honolulu, HA.: Island Heritage, Ltd., 1977. (MU)

Scott, Michael. "Epilepsy: An Update on Treating Brain Disorders That Can afflict Anyone-Anytime." Better Homes and Gardens, May 1977. An overview of the most common types of seizures and appropriate aid for these seizures. (U)

Shumsky, Lou and Zena. Shutterbug. New York, N.Y.: Funk & Wagnall. An 8th grade boy becomes ill with rheumatic fever.

Silverstein, Alvin, Ph.D. and Virginia Silverstein. Epilepsy. Philadelphia, PA.: J. B. Lippincott Co., 1975. A good introduction for young people. (U)

Slote, Alfred. Hang Tough, Paul Mather. Philadelphia, PA.: J. B. Lippincott, 1973. Paul's prime interest in baseball, which he pursues enthusiastically while, at the same time, he courageously copes with leukemia. (MU)

BOOKS FOR ADULTS

Bennett, Margaret. The Peripatetic Diabetic. New York, N.Y.: Hathorne, 1964. A person with diabetes lives a vibrant life.

Books on the Epilepsies for Lay and Professional Readers. Epilepsy Foundation of America: Washington, D.C. 1974. Available through the Comprehensive Epilepsy Program.

Cooper, Irving S., M.D. Living with Chronic Neurologic Disease: A Handbook for Patient and Family. New York, N.Y.: W. W. Norton, 1976.

Epilepsy: You and Your Child, A Guide for Parents. Washington, D.C.: Epilepsy Foundation of America. 1979. An excellent pocket-size resource.

Lagos, Jorge C., M.D. Seizures, Epilepsy, and your Child: A Handbook for Parents, Teachers, and Epileptics of all Ages. New York, N.Y.: Harper and Row, 1974. Written in question-answer format, this book is an aid to parents and teachers.

Livingston, Samuel, M.D. Comprehensive Management of Epilepsy in Infancy, Childhood and Adolescence. Springfield, ILL.: C.C. Thomas, 1972. A detailed analysis of psychological, social, medical and legal aspects of epilepsy.

Massie, Robert and Suzanne. Journey. New York, N.Y.: Warner Books, 1976.

Patterson, Kathryn. No Time for Tears. Chicago, Ill.: Johnson Publications, 1965. The author, who has epilepsy, discusses challenges in her life.

Sands, Harry, Ph.D. and Frances C. Minters. The Epilepsy Fact Book. Philadelphia, PA.: F. A. Davis Co., 1977.

Silberman, Arlene. "Follow-up: I've Stopped Living a Lie!" Good Housekeeping. February 1976. In simple straightforward style, the wife of a famed author tells how she formerly used excuses rather than tell people the truth about her own case of epilepsy.

White, Robin. Be Not Afraid. New York, N.Y.: Berkeley Publishing Corp., 1972. Account of family life with a son with epilepsy.

Wright, George N., Ph.D. Editor. Epilepsy Rehabilitation. Boston, Mass.: Little Brown & Co., 1975.

AUDIOVISUAL MATERIALS

"Epilepsy Is..." Epilepsy Foundation of America (10 minutes-15 minutes). A classroom lesson, available in slide/tape and filmstrip, designed to teach children what happens when a person has a seizure, why it happens, and what they can do to help. Kit includes teacher's guide, simulation activities, and slide/tape or filmstrip. Available for two levels: ages 5-12, and 12 to adult. *

Epilepsy, First Aid for Seizures. Epilepsy Foundation of America. (12 minutes, 16 m.m. or video cassette). *

Images of Epilepsy. Colorado Epilepsy Association, 1835 Gaylord St., Denver, Colorado 80206. A 16 mm color film that describes the three most common types of seizures as seen through the eyes of students who experience the seizures. Can be used with students from grades 4-12.

Tim Talks About Epilepsy. Pfarrago Information Systems, 4760 22nd Ave. N.E., Seattle, Washington, 98105. A 16mm color film. A pantomime presentation coupled with a narrator which describes the nature of epilepsy. For use with students in K-3.

John. (10 minutes, color, 1978.) People You'd Like to Know Series: produced by W.G.B.H. TV, Encyclopedia Britannica. John helps friends come to understand his cystic fibrosis with his constant coughing and need for medication. (M-U) *

It's Up To Me. (7 minutes, color, 1977.) I Can, I Will Series: produced by Alan P. Sloan - Avatar Learning, Inc./Encyclopedia Britannica. Friends learn that Scott needs to have medication available at all times and why he needs to avoid Jill's kitten because of asthma. *

*Films available from Audiovisual Library Service, University of Minnesota, 3300 University Ave. S.E., Mpls., MN 55414.

ORGANIZATIONS

Epilepsy Foundation of America
1828 L Street N.W.
Washington, D.C. 20036
Has a variety of of pamphlets available, as well as films, tapes.

State organizations and agencies are listed in Additional Resource Section at end of packet.

ADDITIONAL RESOURCES

ABOUT ALL DISABILITIES

BOOKS FOR CHILDREN

Adams, Barbara, & Stanfield, James. Like It Is: Facts and Feelings About Handicaps From Kids Who Know. Walker & Company. 1979.

Biklen, Douglas, and Barnes, Ellen. You Don't Have to Hear to Cook Pancakes: A Workbook on Understanding People. Syracuse, N.Y.: Human Policy Press, 1977. A delightful book that helps children learn about differences and similarities among people.

Biklen, Douglas and Sakoloft, Michele. What Do You Do When Your Wheelchair Gets a Flat Tire?: Questions and Answers About Disabilities. Syracuse, N.Y.: Human Policy Press, 1977.

Gelfand, Ravina and Patterson, Letha. They Wouldn't Quit. Minneapolis, MN: Lerner Publishing Co., 1962. Stories about handicapped adults and how they succeeded.

Grealish, Charles A. and Grealish, Mary Jane Von Braunsherg. The Sneely-Mouthed Snerds and the Wonderoctopus. Syracuse, N.Y.: Human Policy, 1975. A story about differences.

Griggenheim, Hans. The World of Wonderful Differences. New York, N.Y.: Friendly House Publishers, 1960.

Kraus, R. Leo, The Late Bloomer. New York, N.Y.: Dutton, 1973. Leo, a tiger, was out of place until he finally bloomed.

McGrath, E. An Exceptional View of Life. An Island Heritage, Norfolk Island Australia, 1977. An excellent book of pictures, poems and stories produced by children with disabilities.

Sackmary, Arnold and Zeeman, Roger. Special People: Basic Facts to Help Children Accept Their Handicapped Peers. New Jersey Association for Children with Learning Disabilities, P.O. Box 249, Covent Station, New Jersey, 1973.

Stein, Sara Bonnett. About Handicaps. New York, N.Y.: Walker & Co., 1974. Vivid photographs and a simple, honest text unfold the story for the child while parents and teachers can follow an accompanying text that provides more specific detail.

Stein, Sara Bonnett. A Hospital Story. New York, N.Y.: Walker & Co.

Taking Charge of Your Life: A Guide to Independence for Teens with Physical Disabilities. Washington, D.C.: Closer Look--Parents' Campaign for Handicapped Children and Youth. 1981. Although this 21 page book gives most emphasis to physical handicaps, references are made to all disabilities. Non-handicapped teens can gain insight into the lives of their handicapped peers.

BOOKS FOR ADULTS

Ackerman, Paul. Kappelman, Murray. Signals: What Your Child is Really Telling You. New York, N.Y.: Dial Press/James Wade, 1978.

Aiello, Barbara. Making It Work: Practical Ideas for Integrating Exceptional Children into Regular Classrooms. Council for Exceptional Children, Reston, VA, 1975.

Barnes, Ellen, Carol Berrigan & Douglas Biklen. What's The Difference? Syracuse New York: Human Policy Press, 1978. A valuable resource for classroom teachers on teaching positive attitudes toward persons with disabilities.

Baskin, Barbara H. & Harris, Karen. Notes from a Different Drummer. Available from R. R. Bowker Co., 1180 Avenue of the Americas, New York, N.Y. 10036. A helpful guide to children's literature which summarizes over 300 books portraying persons with disabilities.

Bookbinder, Susan. Mainstreaming--What Every Child Needs to Know About Disabilities. Exceptional Parent Press, Room 708, Statler Office Bldg., Boston, MA 02216. Excellent resource book.

Boston Women's Health Book Collective. Ourselves and Our Children. New York, N.Y.: Random House, 1978. An interesting book by and for parents which includes insights on parenting special needs children.

Buscaglia, Leo. The Disabled and Their Parents: A Counseling Challenge. Charles B. Slack, 1975. A strong documented appeal to all in helping professions.

Cashdollar, Pat, & Joan Martin. Kids Come in Special Flavors. The Kids Come in Special Flavors Co., P.O. Box 562, Dayton, Ohio 45405, 1978. A kit and book with many ideas for helping children understand handicaps.

Cleary, Margaret. Please Know Me As I Am. Sudbury, Mass: Jerry Cleary Co., 1975. This is a book with suggestions for teachers with ideas for sensitizing non-handicapped **students** to the needs of handicapped children.

Cohen, Dr. Shirley. Accepting Individual Differences. Niles, Ill: Developmental Learning Materials, 1977. A set of 5 teaching guides and three children's books to help elementary students learn about handicaps.

Fallen, Nancy H., & Jill E. McGovern. Young Children with Special Needs. Columbus, Ohio: Charles E. Merrill Publishing Co., 1978. A resource for teachers and parents of young children who have handicaps.

Featherstone, Helen. A Difference in the Family. Life With A Disabled Child. New York: Basic Books, Inc. 1980. A moving book by the mother of a multiply handicapped child about the feelings and emotions of parenting a child with disabilities.

Giedman, John, and Roth, William. The Unexpected Minority: Handicapped Children in America. New York: Harcourt, Brace, Jovanich. 1980. Social rather than biological aspects of disabilities are analyzed.

Gordon, Sol. Living Fully: A Guide for Young People with a Handicap, their Parents, their Teachers and Professionals. New York, N.Y.: The John Day Co., 1975.

Haring, Norris G. Behavior of Exceptional Children. (Second Edition.) Columbus, Ohio: Charles E. Merrill Publishing Co., 1978. An introduction to exceptional children and to the field of special education.

Hayden, Alice H. and Robert K. Smith, Caren, Saaz Von Hippel, Sandra A. Baer. Mainstreaming Preschoolers. Washington, D.C.: U.S. Dept. of HEW - Project Head Start, 1977. This series of books, which includes information on children with various handicaps, is a valuable resource to all preschool professionals and parents.

Hobbs, Nicholas. Futures of Children: Issues in the Classification of Exceptional Children. San Francisco, CA: Jossey-Bass Publishers, 1975. Excellent books from a major study on classification.

I Am, I Can, I Will series from the producers of Mister Roger's Neighborhood. Family Communications, Inc., 4802 5th Ave., Pittsburgh, PA, 1975. Published by Hubbard, P.O. Box 104, Northbrook, Ill. 60062. A series of video, audio and print materials for young children to acquaint them with differences.

Johnson, Richard A., Richard F. Weatherman, and Arnold M. Rehmann. Handicapped Youth and the Mainstream Educator. Minneapolis, MN: The University of Minnesota, 1975. A proceedings of a Special Education Leadership Conference, the book demonstrates a diversity of viewpoints on implications of mainstreaming.

Kappelman, Murray & Ackerman, Paul. Between Parent and School. New York, N.Y.: Dial Press/James Wade, 1977. Excellent resource for parents and schools.

Long, Kate. "Johnny's Such a Bright Boy, What a Shame He's Retarded"--In Support of Mainstreaming in Public Schools. Boston, Mass: Houghton, Mifflin Co., 1978. A fictional book about the need to integrate handicapped children into regular classrooms.

McDonald, Eugene. Understand Those Feelings: A Guide for Parents of Handicapped Children and Everyone Who Counsels Them. Pittsburgh, PA: Stanivix House, 1977.

McNamara, Joan & McNamara, Bernard. The Special Child Handbook. New York, N.Y.: Hawthorn Books, 1977. $12.50

Moore, Coralie; Morton, Kathryn, U.S. Dept. of HEW, Public Health Service, Health Service Administration Bureau of Community Health Service, Rockville, MD. 20857. Write for a free single copy (DHEW Publication HSA 77-5290). Excellent, annotated bibliography.

Payne, James S., and James M. Kauffman, James R. Patton, Gweneth B. Brown, Richard M. DeMott. Exceptional Children in Focus. (Second Edition) Columbus, Ohio: Chas. Merrill Publishing Co., 1979. This compact book gives basic information on disabilities, as well as concepts, issues, and trends.

Peiper, Elizabeth. Sticks and Stones: The Story of Loving a Child. Syracuse, N.Y.: Human Policy Press, 1978. An excellent story of a search for help for a child with disabilities. Applicable to all people who have disabilities. Written by a parent.

People Just Like You. Committee on Youth Development, The President's Committee on Employment of the Handicapped, Washington, D.C., 1979. An excellent activity guide to help children learn about handicaps and persons with disabilities.

Reynolds, Maynard C. Mainstreaming: Origins and Implications. Reston, VA: Council for Exceptional Children.

Reynolds, Maynard C. and Jack W. Birch. Teaching Exceptional Children in All America's Schools. Reston, VA: The Council for Exceptional Children, 1977. A first course for teachers and principals.

Ross, Ruth-Ellen, and L Robert Freelander. Handicapped People in Society: A Curriculum Guide. Burlington, VT: The University of Vermont, 1977. An excellent resource on influencing attitudes of children grades K-12 about handicapping conditions.

Sullivan, Mary Beth, Alan J. Brightman, and Joseph Blatt. Feeling Free. Reading, Mass: Addison-Wesley Publishing Co., Inc., 1979. Five youngsters with various handicaps relate their feelings, as they did in the television series by the same name.

Teacher Please Don't Close the Door--the Exceptional Child in the Mainstream. Ed. June B. Jordon. Reston, VA: Council for Exceptional Children, 1979.

Turnbull, Ann P. and H. Rutherford III. Parents Speak Out: Views from the Other Side of the Two-Way Mirror. Columbus, Ohio: Charles E. Merrill Publishing Co., 1978. A group of articles written by parents of handicapped children who also are special education professionals.

Turnbull, Ann P. and Jane B. Schulz. Mainstreaming Handicapped Students. Boston, MA: Allyn and Bacon, Inc., 1979. A helpful book on techniques and practical ideas for teachers who have, or may in the future have, handicapped children in their classrooms.

Ward, Michael, J., and Robert N. Arkell, Harry G. Dahl, James H. Wise. Everybody Counts. Reston, VA: The Council for Exceptional Children, 1979. A workshop manual to increase awareness of handicapped people.

Wentworth, Elise M. Listen to Your Heart: A Message to Parents of Handicapped Children. Houghton, 1974. A superb book written by the mother of a handicapped child, describing the feelings and reactions experienced by parents of handicapped children. Offers sound, practical suggestions on how to deal with the feelings and problems encountered. Useful for both parents and teachers.

West, S. Working with Parents of Handicapped Children. Reston, VA: Educational Developmental Laboratory, Council for Exceptional Children, 1979.

MEDIA MATERIALS

A Child is a Child. (8 minutes, color) Produced and distributed by Franciscan Communications Center, 1229 Santee St., Los Angeles, Ca. 90015. Depicts the mainstreaming of handicapped preschoolers and their understanding teachers.

A Matter of Inconvenience. (10 minutes, color, 1974) by James Stanfield. Distributed by Stanfield House, 900 Euclid Ave., P.O. Box 3208, Santa Monica, CA 90403. Shows how individuals adapt to their disabilities.

A Touch of Hands (color) Using creative puppetry with disabled and able bodied children, a sensitive art therapist demonstrates how to guide children towards a positive self image and mutual acceptance of each other. Available from The Stanfield House, 12381 Wilshire Blvd., Suite 203, Los Angeles, CA 90025.

Feeling Free. (Series of films, 30 minutes each, color) Produced and distributed by "Feeling Free", Workshop on Children's Awareness, 22 Hilliard St., Cambridge, MA 02138. In each of the films a young person talks about his or her handicap, feelings, interests, etc.

Hello Everybody. (6 color sound filmstrips) Available from The Stanfield House, 12381 Wilshire Blvd., Suite 203, Los Angeles, CA 90025. Information about children who are handicapped.

I Am, I Can, I will series from Mr. Roger's Neighborhood (audio-visual cassette materials) Information available from James Sequin, Family Communications, Inc., 4802 5th Ave., Pittsburgh, PA 15213.

Like You, Like Me. (10 films each 5-6 minutes long, color, sound) Available from Encyclopedia Brittanica Educational Corp., Chicago, ILL 1977. Films help promote understanding and acceptance of handicapped children.

Special Delivery. (5 individual 30 minute films for 7-10 year old children, color, 1977) Produced with funds from Bureau of Education for the Handicapped by WNVT/Central Virginia Educational Television, Inc. Available from Lawren Productions, Inc., P.O. Box 666, Mendocino, CAL. 95460. Lively actions by puppets, handicapped persons, and youngsters help viewers learn about handicaps and ways of relating to children with special needs.

Special Films on Young People with Disabilities, a list of 16 mm films appropriate for elementary and secondary students and available for rental, can be ordered from the Audio Visual Library Service, 3300 University Ave. S.E., University of Minnesota, Mpls., MN 55414. (Phone (612) 373-3940)

Television Resources: (frequently feature programs on handicaps) Sesame Street, Children's Television Workshop, 1 Lincoln Plaza, New York, N.Y. 10023

Zoom, c/o GBH Educational Foundation, 125 Western Ave., Boston, Ma. 02134.

GLOSSARY OF INAPPROPRIATE VS. APPROPRIATE TERMS IN THE VOCABULARY OF DISABILITIES

Please avoid these terms:	Try these instead:
AFFLICTED: a very negative connotation that gives the impression of being "down and out."	AFFECTED BY: is more positive and more accurate terminology.
CEREBRAL PALSIED: sounds like a "thing."	PERSON WHO HAS CEREBRAL PALSY: better
CRAZY: may refer to a person's sense of humor but not to his handicap.	EMOTIONALLY DISABLED: accurately describes a particular type of handicapping condition.
CRIPPLED: portrays an image no one wants to think about.	PHYSICALLY DISABLED: more accurate picture of what is often meant by "crippled".
CONFINED TO A WHEELCHAIR: sounds like a punishment	USES A WHEELCHAIR: the wheelchair is an aide to mobility
DEAF AND DUMB: outdated term since dumb no longer refers to inability to communicate but rather to stupidity (in slang). Lack of speech does not indicate lack of intelligence.	DEAF OR HEARING IMPAIRED AND COMMUNICATES WITH SIGN: is usually the fact of the matter.
DISEASE: inappropriate for most handicaps because they're not illnesses, not contageous, and not unhealthy.	CONDITION: most persons with disabilities are very healthy, so this is a better term.
FITS: outdated term that deserves to fade in light of 20th century understanding of epilepsy.	SEIZURES: the best term available to describe inappropriate or overloaded electrical impulses sent from the brain to various parts of the body.
GIMP: not worth describing	AMPUTEE: explains precisely that a limb is missing.
HARE LIP: an old term that gave an image of a rabbit's mouth--appropriate only for bunnies.	CLEFT LIP: which may also include cleft palate (roof of mouth) and which is usually surgically corrected in infancy.
IDIOT: also not worth describing	SEVERELY MENTALLY RETARDED OR BRAIN DAMAGED: is more likely the appropriate condition.
INSANE: as bad as "crazy"	MENTALLY ILL: is the accurate term most preferred.
MAIMED: as unappealing as "crippled".	DISABLED, INJURED: are better choices.
MENTAL: is only an adjective, never a noun.	MENTALLY HANDICAPPED is the preferable term, or MENTALLY RETARDED.
MORON: definitely out!	Same as above
RETARD: only a verb, never a noun.	Same as above
SICK: only if there are symptoms like a fever, aches and pains, chills... has nothing to do with a handicap.	MENTALLY ILL: if that's the disability intended in the term "sick".
VICTIM: only if a person is involved in a car accident or plane crash, or is the object of a crime.	NO SUBSTITUTE--just say "person who has..."

POINTS TO REMEMBER WHEN YOU MEET A PERSON WHO HAS A DISABILITY

Remember that a person who has a disability is a person--like anyone else.

Relax. If you don't know what to do or say, allow the person who has a disability to help put you at ease.

Explore your mutual interests in a friendly way. The person likely has many interests besides those connected with the disability.

Offer assistance if asked or if the need seems obvious, but don't overdo it or insist on it. Respect the person's right to indicate the kind of help needed.

Talk about the disability if it comes up naturally without prying. Be guided by the wishes of the person with the disability.

Appreciate what the person can do. Remember that difficulties the person may be facing may stem more from society's attitudes and barriers than from the disability itself.

Be considerate of the extra time it might take for a person with a disability to get things said or done. Let the person set the pace in walking or talking.

Remember that we all have handicaps; on some of us they show.

Speak directly to a person who has a disability. Don't consider a companion to be a conversational go-between.

Don't move a wheelchair or crutches out of reach of a person who uses them.

Never start to push a wheelchair without first asking the occupant if you may do so.

When pushing a wheelchair up or down st[illegible] ramps, curbs, or other obstructions, ask the person how he or she wants you to proceed.

Don't lean on a person's wheelchair when talking.

Give whole, unhurried attention to the person who has difficulty speaking. Don't talk for the person, but give help when needed. Keep your manner encouraging rather than correcting. When necessary, ask questions that require short answers or a nod or shake of the head.

Speak calmly, slowly, and distinctly to a person who has a hearing problem or other difficulty understanding. Stand in front of the person and use gestures to aid communication. When full understanding is doubtful, write notes.

When dining with a person who has trouble cutting, offer to help if needed. (It may be easier to ask if the person would prefer to have the food cut in the kitchen.) Explain to a person who has a visual problem where dishes, utensils, and condiments are located on the table.

Be alert to possible existence of architectural barriers in places you may want to enter with a person who has a disability; watch for inadequate lighting, which inhibits communication by persons who have hearing problems.

Taken from The National Easter Seal Society for Crippled Children and Adults, 2023 W. Ogden Ave., Chicago, Ill. 60612.

ABLE (Association for Blind Living and Education), 5307 Northport Drive, Brooklyn Center, MN 55429, (612) 537-8000

ADVOCATE FOR THE BLIND, 1821 University Ave., Room 389 So., St. Paul, MN 55104, (612) 645-3920

ADVOCATING CHANGE TOGETHER (ACT), Advocacy for mentally retarded persons, Sabathani Community Center, 310 E. 38th St., Suite 109, Mpls., MN 55409, (612) 825-8055

AMERICAN DIABETES ASSOCIATION OF MINNESOTA (ADAM), 3005 Ottawa Ave. S., Mpls., MN 55416, (612) 920-6796

AMERICAN HEART ASSOCIATION/MN. AFFILIATE, 4701 W. 77th St., Mpls., MN 55435, (612) 835-3300 Voice & TTD

ARTHRITIS FOUNDATION, MN. CHAPTER, 122 Franklin Ave. W., Suite 440, Mpls., MN 55404, (612) 874-1201, Outstate Toll Free/1-800-552-1278

ASSOCIATION FOR RETARDED CITIZENS OF ANOKA COUNTY, Riverwood Community Center, 7150 E. River Rd., Room 11, Fridley, MN 55432, (612) 571-5318

ASSOCIATION FOR RETARDED CITIZENS OF DAKOTA COUNTY, 33 E. Wentworth Ave., Room 105, W. St. Paul, MN 55118, (612) 457-2588

ASSOCIATION FOR RETARDED CITIZENS OF DULUTH, 201 Ordean Bldg., Duluth, MN 55802, (218) 726/4725

ASSOCIATION FOR RETARDED CITIZENS OF HENNEPIN COUNTY, 2344 Nicollet Ave. S., Third Floor, Minneapolis, MN 55404, (612) 874-6650

ASSOCIATION FOR RETARDED CITIZENS OF MINNESOTA, 3225 Lyndale So., Mpls., MN 55408, For ARC contacts in 62 areas not listed please call (612) 827-5641, Toll free 1-800-582-5256

ASSOCIATION FOR RETARDED CITIZENS OF OLMSTED COUNTY, 903 W. Center St. #140, Rochester, MN 55902, (507) 287/2032

ASSOCIATION FOR RETARDED CITIZENS OF ST. PAUL, 65 E. Kellogg Blvd., Suite 437, St. Paul, MN 55101, (612) 224-3301

ARRM (ASSOCIATION OF RESIDENCES FOR THE RETARDED IN MINNESOTA), 1885 University Ave., Suite 90, St. Paul, MN 55104-3486, (612) 644/8181, Toll free: 1-800-551-2211

COMPREHENSIVE EPILEPSY PROGRAM (CEP), 2701 University Ave. S.E., Suite 106, Mpls., MN 55414, (612) 376-5031

COURAGE CENTER (FORMERLY MN. SOCIETY FOR CRIPPLED CHILDREN AND ADULTS), 3915 Golden Valley Road, Golden Valley, MN 55422, (612) 588-0811 Voice & TTY

CYSTIC FIBROSIS FOUNDATION, 2344 Nicollet Ave., Suite 150, Mpls., MN 55404, (612) 871-0462, Toll Free 1-800-582-5245

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EPILEPSY FOUNDATION OF MINNESOTA, (Formerly known as MINNESOTA EPILEPSY LEAGUE), 672 Transfer Rd., St. Paul, MN 55114, (612) 646-8675, Toll Free 1-800-292-7932

FAMILY INTEREST GROUP - HEAD TRAUMA (FIGHT), Box 375, Excelsior, MN 55331, (612) 473-8687

FEINGOLD ASSOCIATION OF MINNESOTA, (Organization for parents of hyperactive children), 381 E. Cook St., St. Paul, MN 55101, (612) 774-8887

FRIENDS OF HEARING HANDICAPPED CHILDREN, P.O. Box 65414, St. Paul, MN 55165, (612) 457-5340

HEMOPHILIA CENTER, Box 713 Mayo, 420 Delaware St., Mpls., MN 55455, (612) 376-1777

IN TOUCH, INC., 310 4th Ave. S., Suite 718, Mpls., MN 55415, (612) 342/2066 TTY & Voice. (Agency serving deaf-blind adults)

NATIONAL KIDNEY FOUNDATION OF THE UPPER MIDWEST, 1821 University Ave., Room 360S, St. Paul, MN 55104, (612) 645-8605

LEGAL ADVOCACY FOR THE DEVELOPMENTALLY DISABLED OF MINNESOTA, 222 Grain Exchange Bldg., 323 4th Ave. S., Mpls., MN 55415, (612) 338-0968, Outstate Toll Free 1-800-292-4150, (Free legal services to developmentally disabled persons.)

MENTAL HEALTH ADVOCATES COALITION OF MINNESOTA, 265 Fort Road (W. 7th St.), St. Paul, MN 55102, (612) 222-2741

MENTAL HEALTH ASSOCIATION OF MINNESOTA, 5501 Green Valley Dr., Suite 103, Bloomington, MN 55437, (612) 835-9046, Toll Free: 1-800-862-1799

METRO CENTER FOR INDEPENDENT LIVING, 1821 University Ave., Suite N350, St. Paul, MN 55104, (612) 646-8342 Voice; (612) 646-6048 TTY

METROPOLITAN ASSOCIATION FOR THE HEARING IMPAIRED, Nan Pepin, 5605 Aldrich Ave. S., Mpls., MN 55419, (612) 861-3997, TTD (612) 881-2842

MINNESOTA ASSOCIATION FOR CHILDREN WITH LEARNING DISABILITIES, 1821 University Ave., Room 494 No., St. Paul, MN 55104, (612) 646-6136

MINNESOTA COMMITTEE FOR THE HANDICAPPED, 2527 Monterey Ave. S., St. Louis Park, MN 55416 (612) 922-4544 (Umbrella organization for legislation concern.)

MINNESOTA COUNCIL FOR THE GIFTED AND TALENTED, 5701 Normandale Rd., Room 309, Box 70, Mpls., MN 55424, (612) 927-9546

MINNESOTA FOUNDATION FOR BETTER HEARING AND SPEECH, 508 Bremer Bldg., 7th & Robert Streets, St. Paul, MN 55101 (612) 222-6866 TTY & Voice

MINNESOTA SPEECH-LANGUAGE AND HEARING ASSOCIATION, P.O. Box 26605, St. Louis Park, MN 55426, (612) 935-5057

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MINNESOTA STATE COUNCIL FOR THE HANDICAPPED, Metro Square Bldg., Suite 208, 7th & Robert Streets, St. Paul, MN 55101, (612) 296-6785 TTY & Voice

MINNESOTA RADIO TALKING BOOK NETWORK, Communication Center, 1745 University Ave., St. Paul, MN 55104, (612) 296-6723, (A free closed circuit radio reading service and special library services, leisure and educational.)

MINNESOTA WEST-METRO CHAPTER, NATIONAL SOCIETY FOR AUTISTIC CHILDREN, 5624 73rd Ave. N., Brooklyn Park, MN 55429, (612) 560-5330

MUSCULAR DYSTROPHY ASSOCIATION, 1821 University Ave., N170, St. Paul, MN 55104, (612) 646-7557

NATIONAL ATAXIA FOUNDATION, 600 Twelve Oak Center, 15500 Wayzata Blvd., Wayzata, MN 55391, (612) 473-7666

NATIONAL FEDERATION OF THE BLIND OF MINNESOTA, Chamber of Commerce Bldg., Suite 715, 15 S. 5th, Mpls., MN 55402, (612) 332-5414

NATIONAL MULTIPLE SCLEROSIS SOCIETY, NORTH STAR CHAPTER, 2344 Nicollet Ave., Suite 280, Mpls., MN 55404, (612) 870-1500

OSTEOGENESIS IMPERFECTA ASSOCIATION, AMERICAN BRITTLE BONE SOCIETY, 2 W. St. Albans Rd., Hopkins, MN 55343, (612) 936-0946

PACER CENTER, INC., (Parent Advocacy Coalition for Educational Rights), 4826 Chicago Ave. S., Mpls., MN 55417, (612) 827-2966 TTY & Voice

PARENTS OF CLEFT CHILDREN, Minnesota Department of Health, 717 Delaware St. S.E., P.O. Box 9441, Mpls., MN 55440, (612) 623-5174

PARENTS FOR HEART, 410 Zinnia Lane N., Plymouth, MN 55441, (612) 545-5562

PRADER-WILLI SYNDROME ASSOCIATION, 5515 Malibu Dr., Edina, MN 55436, (612) 933-0113

SCHIZOPHRENIA ASSOCIATION OF MINNESOTA, 6950 France Ave. S., Edina, MN 55435, (612) 922-6916

SPINA BIFIDA ASSOCIATION OF MINNESOTA, P.O. Box 29323, Brooklyn Center, MN 55429, (612) 429-6033, Toll Free: 1-800-621-3141

TOURETTE SYNDROME ASSOCIATION, Minnesota Chapter, 3403 Red Oak Circle N., Burnsville, MN 55337, (612) 890-9404

TUBEROUS SCLEROSIS IN MINNESOTA, 2986 N. Howard, Maplewood, MN 55109, (612) 777-4833

TWIN CITIES SOCIETY FOR CHILDREN AND ADULTS WITH AUTISM, 1729 Carroll Ave., St. Paul, MN 55104 (612) 642-9042

UNITED CEREBRAL PALSY ASSOCIATION OF MINNESOTA, 1821 University Ave., 233 So., St. Paul, MN 55104, (612) 646-7588

UNITED HANDICAPPED FEDERATION, 1821 University Ave., Suite 284 So., St. Paul, MN 55104, (612) 645-8922 Voice & TTY

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MINNESOTA STATE AGENCIES

DEVELOPMENTAL DISABILITIES STATE PLANNING OFFICE, 201 Capitol Square, 550 Cedar St., St. Paul, MN 55101, (612) 296-4018

DIVISION OF VOCATIONAL REHABILITATION, Space Center Bldg., 444 Lafayette Rd., Third Floor, St. Paul, MN 55101. (612) 296-5616

MINNESOTA STATE DEPARTMENT OF EDUCATION, SPECIAL EDUCATION, 809 Capitol Square Bldg., 550 Cedar St., St. Paul, MN 55101, (612) 296-4163

MINNESOTA DEPARTMENT OF HUMAN SERVICES, 4th Floor Centennial Office Bldg., 658 Cedar St., St. Paul, MN 55155, (612) 296-6117, Developmental Achievement Centers, Day Care and Nursery School licensed by Department of Human Services.

REGIONAL SERVICE CENTER FOR HEARING IMPAIRED PEOPLE (RSC), WEST METRO 311 2nd Ave. S., Third Floor, Mpls., MN 55401, (612) 341/7100 Voice; (612) 341-7492 (TTY/TTD).

REGIONAL SERVICE CENTER FOR HEARING IMPAIRED PEOPLE (RSC), EAST METRO Space Center, 6th floor, 444 Lafayette Road, St. Paul, MN 55101, (612) 297-4828 plus Extensions 29 & 30 (TTY & Voice)

REGIONAL SERVICE CENTER FOR HEARING IMPAIRED PEOPLE (DULUTH), Government Service Centr, 320 W. Second St., Suyite 611, Duluth, MN 55802, (218) 723-4961 Voice & TDD

REGIONAL SERVICE CENTER FOR HEARING IMPAIRED PEOPLE (ST. CLOUD), 54-28th Ave. N., St. Cloud, MN 56301, (612) 255-2224 Voice & TDD

SERVICES FOR CHILDREN WITH HANDICAPS, Minnesota Department of Health, 717 S.E. Delaware St., P.O. Box 9441, Mpls., MN 55440, (612) 623-5150, (Provides free evaluation of handicapped children from birth-21 and may pay for treatment.)

MINNESOTA STATE DOCUMENTS CENTER, Copy of rules, special classes and services for handicapped children, 117 University Ave., St. Paul, MN 55155, (612) 296-2875

STATE SERVICES FOR THE BLIND AND VISUALLY HANDICAPPED, 1745 University Ave., St. Paul, MN 55104, (612) 296-6080

STATE SERVICES FOR THE DEAF, Department of Human Services, Centennial Bldg., 4th floor, 658 Cedar St., St. Paul, MN 55155, (612) 296-3980 Voice & TTY; (612) 297-3637 ONLY TTY; (612) 296-4850 ONLY TTY)

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NATIONAL ORGANIZATIONS AND AGENCIES

ALEXANDER GRAHAM BELL ASSOCIATION FOR THE DEAF, 3416 Volta Place N.W., Washington, D.C. 20007, (202) 337-5220

AMERICAN COALITION OF CITIZENS WITH DISABILITIES, 1200 15th St. N.W., Suite 201, Washington, D.C. 20005, (202) 785-4265

AMERICAN COUNCIL OF THE BLIND, 1211 Connecticut Ave. N.W., Washington, D.C. 20006, (202) 833-1251

AMERICAN FOUNDATION FOR THE BLIND, 15 W. 16th St., New York, N.Y. 10011, (212) 620-2000

AMERICAN SPEECH, LANGUAGE, AND HEARING ASSOCIATION, 10801 Rockville Pike, Rockville, MD 20852, (301) 897-5700

ASSOCIATION FOR CHILDREN AND ADULTS WITH LEARNING DISABILITIES, 4156 Library Road, Pittsburgh, PA 15234, (412) 341-1515

CENTER FOR LAW AND EDUCATION, Gutman Library, 6 Appian Way, Cambridge, MA 02138, (617) 495-4666

CENTER ON HUMAN POLICY, 4E-Huntington Hall, Syracuse University, Syracuse, N.Y. 13210, (315) 423-3851

CHILDREN'S DEFENSE FUND, 122 C St. N.W., Washington, D.C. 20001, (202) 628-8787

CLOSER LOOK/PARENTS' CAMPAIGN FOR HANDICAPPED CHILDREN AND YOUTH, 1201 16th St. N.W., Washington, D.C. 20036, (202) 822-7900

COUNCIL FOR EXCEPTIONAL CHILDREN (CEC), 1920 Association Drive, Reston, VA 22091, (703) 620-3660

DISABILITY RIGHTS EDUCATION AND DEFENSE FUND (DREDF), 2032 San Pablo Ave., Berkeley, CA 94702, (415) 644-2555

EPILEPSY FOUNDATION OF AMERICA, 4351 Garden City Dr., Suite 406, Landover, MD 20785, (301) 459-3700

FEDERATION FOR CHILDREN WTH SPECIAL NEEDS (National Network of Parents Coalition), 312 Stuart St., Boston, MA 02116, (617) 482-2915

MENTAL HEALTH ASSOCIATION NATIONAL HEADQUARTERS, 1800 N. Kent St., Alexandria, VA 22209, (703) 528-6405

MENTAL HEALTH LAW PROJECT, 2021 L St. N.W., 8th floor, Washington, D.C. 20036, (202) 467-5730

MEXICAN-AMERICAN LEGAL DEFENSE FUND, 28 Geary St., San Francisco, CA 94108, (415) 981-5800

NATIONAL ALLIANCE FOR THE MENTALLY ILL, 1200 15th St. N.W., Suite 400, Washington, D.C. 20005, (202) 833-3530

NATIONAL ASSOCIATION OF THE DEAF, 814 Thayer Ave., Silver Springs, MD 20910,

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(301) 587-1788

NATIONAL ASSOCIATION FOR DOWN'S SYNDROME, P.O. Box 63, Oak Park, IL 60303, (312) 543-6060

NATIONAL ASSOCIATION FOR RETARDED CITIZENS, 2501 Avenue J, Arlington, TX 76011, (817) 640-0204

NATIONAL CENTER FOR LAW AND THE DEAF, 800 Florida Ave. N.E., Washington, D.C. 20002, (202) 651-5454

NATIONAL DOWN'S SYNDROME CONGRESS, 1640 W. Roosevelt Road, Chicago, IL 60608, (312) 226-0416

NATIONAL EASTER SEAL SOCIETY, 2023 W. Ogden Ave., Chicago, IL 60612, (312) 243-8400

NATIONAL FEDERATION OF THE BLIND, 655 15th St. N.W., Suite 300, Wahington, D.C. 20005, (202) 639-4028

NATIONAL ORGANIZATION FOR ALBINSIM & HYPOPIGMENTATION (NOAH), 919 Walnut St., Room 400, Philadelphia, PA 19107, (215) 627-3501

NATIONAL SOCIETY FOR CHILDREN AND ADULTS WITH AUTISM, 1234 Massachusetts Ave. N.W., Suite 1017, Washington, D.C. 20005, (202) 783-0125

OFFICE FOR CIVIL RIGHTS NATIONAL OFFICE: Department of Education, 400 Maryland Ave. S.W., Room 5000, Switzer Bldg., Washington, D.C. 20202

OFFICE OF CIVIL RIGHTS, Department of Education, 300 S. Wacker Dr., Chicago, IL 60606 (312) 886-3456

SPINA BIFIDA ASSOCIATION OF AMERICA, 343 S. Dearborn St., Room 319, Chicago, IL 60604, (312) 663-1562

THE ASSOCIATON FOR PERSONS WITH SEVERE HANDICAPS (TASH), 7010 Roosevelt Way N.E., Seattle, WA 98115, (206) 523-8446

UNITED CEREBRAL PALSY ASSOCIATION, 66 E. 34th St., New York, N.Y. 10016, (212) 481-6300

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